THIS WEEK'S National Petroleum NEWS

Coming Meetings

1933

American Chemical Society, Stevens Hotel, Chicago, Sept. 10 to 15.

National Petroleum Association, Traymore Hotel, Atlantic City, N. J., Sept. 20, 21, 22.

International Gas Conference and annual meeting, American Gas Association, Stevens Hotel, Chicago, Sept. 25 to 30.

Ohio Petroleum Marketers Association, Inc., Hotel Mayflower, Akron, Sept. 27, 28.

National Oil Marketers Association, organization meeting, Palmer House, Chicago, Oct. 5.

American Petroleum Institute, annual meeting, Chicago, Oct. 24, 25, 26.

Kentucky Petroleum Marketers Association, Louisville, Ky., October, dates not set.

Big Four State Independent Oil Jobbers Association, Kansas City, Mo., October, dates not set.

American Association of Petroleum Geologists, Pacific section, Los Angeles, November, dates not set.

Rocky Mountain Oil and Gas Association, Great Falls, Mont., December, dates not set.

American Institute of Chemical Engineers, Roanoke, Va., December, dates not set.

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General

Oil Code Is Effective as Signed; Price Fixing Postponed 7
Texas Overproduction to Be Classed as "Hot Oil," Ickes Warns 11
Advocates of Price Fixing Control Code's Planning Committee 12
Oklahoma Accepts Its Quota of Daily Oil Output 13
California Relinquishes Voluntary Proration, Under Oil Code 13
Suspension of Texas Anti-Trust Laws, During NRA, Is Asked 14
To Beat the Code, Texas Gasoline Rolls from Plants, to Buyers Unknown 15
Oil Executives Praise Allocation Order of Secretary Ickes 16
Benedum, Government's Representative, A Pioneer Oil Producer 17
Labor Rules Apply to Commission Stations, Marketers Hold 17
Oil Code Is Principal Topic for Refiners' Meeting 18
Workers Being Organized in Active Refining and Producing Districts 18
Newest in Auto Accessory Line for Chicago Exhibit 19
New Oil Test Correlating with Service Is Announced 20

Merchandising

Power Prover Analyzes Exhaust Gases to Determine Motor Efficiency—*by L. T. White* 31

Engineering

Apparatus for Finding Load-Carrying Capacity of E.P. Lubricants—*by S. A. McKee, F. G. Bitner* and *T. R. McKee* 21
Constant Temperature—Steam Distillation for Analysis of Heavy Fractions 29

Markets

Chicago Market Marks Time Pending Code Action 39
Chicago Tank Car Market 40
Mid-Continent; Prices Rise for All Commodities 40
California; Retail Markets Remain Unsettled 41
Refinery Markets 42, 43
Eastern; T. C. Prices Up as Retail Markets Improve 44
Wax; Prices Generally Steady 44
Pennsylvania; Prices Higher Following Crude Advance 45
Tank Wagon, Service Station Markets 46, 47, 48
Barometer of Mid-Continent Refinery Market 49
Compilation of Mid-Continent Refinery Operations 50
A.P.I. Report of Refinery Operations, Week Ended Sept. 2 51
Complete Seaboard Markets 52
Refiners' and Compounders' Supplies 54
Crude Oil Prices, All Fields 55, 56

Departments

The Editors' Viewpoint 9
New Equipment 60
New Refining Patents 62
On the Lazy Bench 64
Oil Company Finance 66, 67

New Automotive Developments

AMONG new developments in the automotive industry presented at the International Automotive Engineering Congress in Chicago Aug. 8-Sept. 4 the fluid flywheel, high-speed diesel engines, reduced car weights and motor oil requirements occupied the spotlight.

European diesel developments are far ahead of those in the U. S. so far as commercial application is concerned; technical advances have been forced upon makers by economic conditions. The lightweight passenger car, using large percentages of light alloys and low powered engines has become the vogue there, for the same reasons. Stable lubricating oils are more imperative than ever, with present and projected engine designs.

Discussions on these and other important factors in automotive progress will be reviewed in next week's issue.

MICHAEL L. BENEDUM, Roosevelt appointee as a government member on the oil code Planning and Co-ordination Committee, has been an oil man since his boyhood in West Virginia. He has been interested in national politics only since the Davis campaign in 1924. His appointment to the committee came as a reward for his services to the Roosevelt candidacy both before and after the convention and because the President knew him to be an oil man of wide experience. See Page 17 for more details.

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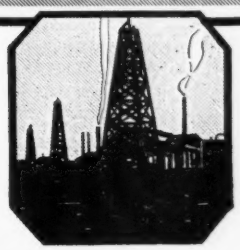

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Oil Code is Effective as Signed Price Fixing Postponed

By J. C. Chatfield
N. P. N. Staff Writer

WASHINGTON, Sept. 2 THE oil code became effective Sept. 2 exactly as signed by President Roosevelt two weeks ago but without any action on the part of the administration to fix a base price for gasoline in the Mid-Continent and, through it, the price of Mid-Continent crude as provided in the code.

Up until 4 o'clock the afternoon of Sept. 2 it had been conceded generally that Secretary of the Interior Ickes, administrator for the oil code, would fix the price of 60-64 octane U. S. Motor gasoline in Group 3 at 6 to 6.5 cents per gallon.

Using the 18.5 constant this would have placed the price of 36 gravity Mid-Continent crude at about $1.11 to $1.20 per barrel.

At that hour, however, the Secretary entered the conference room of the Planning and Co-ordination committee in the Department of the Interior building and announced that he had determined not to invoke price fixing sections of the code for the present.

Secretary Ickes also announced to the committee that he would not approve for the present any of the changes in the code recommended. In the 25 hours that the committee had deliberated on Aug. 31 and Sept. 1, it had proposed so many changes in the text of the original code that the Secretary and his advisers determined that they should obtain the personal approval of President Roosevelt before permitting the changes to go into effect.

Immediate approval of the changes by the President was not possible because Roosevelt was at sea en route from Hyde Park to Washington.

Another factor in the delay was the fact that the Secretary had on his desk a vast number of protests from the industry dealing with various phases of the code. He had received his appointment as Administrator only four days before the code was effective, which made it physically impossible to digest all of these complaints.

Sole action taken by the Administrator at the time the code became effective was to allocate crude production among the various states and issue the necessary orders with reference to stock withdrawals and imports and to set up the Central Proration Committee in California as an official body to administer the production provisions there, since there is no official state proration machinery in California.

An important action taken by Ickes, as Administrator, was to order that there be no net withdrawals of crude oil from storage except with the approval of the Planning and Co-ordination Committee. Sec. 2 of Art. 3 of the code had provided that total withdrawals of crude should not exceed 100,000 barrels daily for the remainder of 1933 and that no additions be made to storage without specific approval of the committee.

IMPORTS of crude and products were ordered limited to an amount not exceeding the daily average imports in the last half of 1932. This is in line with the formula which has been accepted generally by the industry.

Crude production allocations announced by Ickes are somewhat higher than had been anticipated, the change in storage-withdrawal policy being responsible for the major part of the increase. The allocations

are to become effective Friday, Sept. 8 at 7 a. m. as follows:

	Barrels Daily
Arkansas	29,000
California	480,000
Kansas	111,000
Louisiana	70,000
Texas	975,200
Oklahoma	540,000
New Mexico	41,400
Rky. Mt. States	38,900
Appalachian States	94,200
Michigan	30,000
Total	2,409,700

This allocation compares with actual production averaging 2,756,400 barrels daily average in the week ended Aug. 26, as estimated by the American Petroleum Institute. Of the 346,700-barrel difference between actual production and the allotment, 241,050 barrels comes from Texas, where output that week averaged 1,216,250 barrels daily.

Following is the production by states in the week ended Aug. 26 with differences above and below the code allotment:

	Barrels Daily	Amount Above Allotment
Arkansas	31,300	2,300
California	501,400	21,400
Kansas	128,950	17,950
Louisiana	73,000	3,000
Texas	1,216,250	241,050
Oklahoma	605,500	65,500
New Mexico	41,400	none
Rky. Mt. States	37,700	1,200*
Appalachian	92,500	1,700*
Michigan	28,400	1,600*
Total	2,756,400	346,700

* Less than Allotment

Allocations approved by Ickes were telegraphed by him Sept. 2 to the governors of all states affected by the order.

Shortly after Secretary Ickes announced to the committee his determination not to fix prices at once he called in newspaper correspondents who had been waiting since eleven that morning for word as to what the committee had done. He told the reporters that he had received recommendations on price fixing from the Planning and Coordination committee but had determined not to take any action now.

"I see no reason for invoking any powers given me under the code which it may not be necessary to exercise," Ickes said. "The administration has the power to fix a base price for gasoline and through it the price of crude oil but it does not seem advisable at this time to take such action. If we can get production and consumption within speaking distance of each other perhaps it may not be necessary to take any action towards price fixing."

This statement of Ickes was in line with one he had made to the press on the day he was appointed Federal Oil Administrator. Then he said: "It may not be necessary to invoke the provisions of Sec. 6a."

Asked whether Sec. 6 would not fix the minimum price for crude without any direct action on his part, Secretary Ickes replied that in his opinion Sec. 6 was not self enforcing.

Rumors had been current through the Interior Department building most of the afternoon that someone had "thrown a monkey wrench in the price fixing machinery." These rumors were caused by the fact that the Secretary had planned to make his announcement at 11 o'clock in the morning and had gradually postponed the hour, and by a remark which had been dropped by an employe of the department.

The Planning and Co-ordination Committee itself had expected to confer with Ickes immediately after its noon recess. When the members trouped up to the door of the Secretary's offices they were told that Ickes would not be ready to receive them until four. Meanwhile Ickes was in conference most of the day with the government members of the committee, James A. Moffett, M. L. Benedum and Donald R. Richberg and his assistant solicitors Fahy, Marshall and Meyers.

Secretary Ickes, however, denied there had been any monkey wrench thrown. He said that no disagreement had developed in the committee but that, in the final analysis, he had merely determined not to fix prices at this time.

It is quite apparent that Secretary Ickes takes his responsibility to the public as well as to the industry quite seriously. He made a special point of having the daily newspaper men take down this statement: "We are going to watch the price of gasoline very carefully and we hope that it will not get out of a fair and proper relationship with the posted price of crude oil," he said. Later he made it clear that it was the retail price in which he was chiefly interested.

"How are you going to keep the price of gasoline low and yet allow the producers more money for his oil and the refiner and marketer more to pay his increased costs?" one newspaper man asked the secretary.

"If you can answer that question I would be glad to hear the answer," Ickes replied with a laugh.

A considerable number of changes in the code have been recommended by the Planning and Co-ordination committee. These changes are so numerous that Ickes is said to have taken the position that he would prefer to have President Roosevelt look them over before he gives his approval. His attitude is not such that the committee fears that many of the recommendations will be overridden.

Changes proposed in the production of the code center on making the allocations mandatory on the oil producing states. As originally written, Sec. 3 of Art. 3 says the "Allocations, when approved by the President, shall be recommended as the operating schedules for the producing states and for the industry." The committee proposes that the words "be recommended as" be stricken out and the word "become" inserted instead.

In the marketing section most of the proposed changes

(*Continued on Page* 10)

Daily Average Production, Important Districts, American Petroleum Institute Figures

	Week Ended Sept. 2 Barrels	Aug. 26 Barrels
Okla. City	205,950	265,600
Total Okla.	548,150	605,500
East Texas	609,450	605,950
Total Texas	1,229,000	1,216,250
California	500,200	501,400
East of Rockies	1,771,200	2,255,000
Total U. S.	2,721,400	2,756,000
Crude Imports	121,280	113,570
Total New Supply	2,392,680	2,869,970

THE EDITORS' VIEWPOINT

Roosevelt's Selection of Planning Committee is Good

By Warren C. Platt, Editor

THE oil industry is now operating under its NRA code, under the management of a most excellent and representative Planning and Coordination Committee which reports direct to Secretary of the Interior Ickes, Federal Oil Administrator.

The industry had to come under the code as drawn by Administrator Johnson and his assistants, which was in a fairly tangled condition, due to the haste with which it was prepared. However, the Planning Committee has made recommendations to Secretary Ickes clearing up many of the ambiguities, which recommendations should soon be approved by the President and be made known to the industry. In the meantime the oil industry has had to do its own interpreting of the cloudy sections.

Secretary Ickes' first move was to approve the recommendation of the committee to limit current production and to allocate it to the oil producing states and make the states' compliance therewith mandatory. For this he is to be highly commended. Control of crude oil output is absolutely essential to any upbuilding of the oil industry and, while there may be some legal questions involved, the federal government might just as well use a firm hand at the start as later, because the industry cannot have much faith in the promises of the Texas crowd to control production.

Now it is up to these Texas enforcing officers to enforce the law, or openly defy the President and oppose his whole recovery program.

The industry is to be particularly congratulated on the representative character of the Planning and Coordination Committee. It is truly representative of all the legitimate interests of the oil industry and its membership also is able individually. The President is to be commended for not recognizing in any way the East Texans who were so belligerently vociferous during the code hearings at Washington. It was feared by many that, for political reasons, the President would place one of them on the committee. In not doing so, he raises more confidence in the oil industry as to the success of his whole program.

The President also ignored all the rump associations of various kinds, which were organized over night for the code hearings and which made so much noise there and dragged the hearings out unnecessarily, with hours of wearisome and unnecessary talk.

The President further ignored the impudent demands of the American Federation of Labor whose representative sat with the elect on the platform at Johnson's side all during the code hearings and one day, in a loud and truculent voice, demanded of Johnson's deputy that the American Federation of Labor be represented on the Planning committee by one third of the membership. He also demanded that the Federation not only suggest the names of its representatives but actually, in the words of its representative, "make the appointments."

This was such a disclosure of pure gall that even Johnson's deputy had to call the Federation's man to account and ask him why he wanted to take the appointing power away from the President. The President will undoubtedly have to rebuke the professional trade unions a good deal in the near future, if he expects his recovery plan to work out.

The chief thing for the oil men and for all other business men to keep in mind is that the Recovery Act is not aimed to cure all the ills of an industry except only incidentally as may be necessary to increase employment and raise wages. In listening to discussions and in looking over various codes one is impressed with the thought that the average man, when he gets into a code meeting, is more concerned about cleaning up his industry, even to a Utopian degree, and forgets the main objective of the administration at Washington, which is to get people back to work.

Reprints of Approved Oil Code

THE large demand for reprints of the new Oil Code signed Aug. 19, by President Roosevelt has made possible the following new low prices:

Postage or Express Prepaid

1 to 9 copies	15 cents each
10 to 25 copies	10 cents each
25 to 100 copies	5 cents each
100 to 500 copies	$4.00 per 100
500 to 1000	$3.00 per 100

Express Collect

1000 or more (Boxed)	$20.00 per 1000

Please send stamps or check with order, as we cannot open accounts on small items of this character.

Oil Code Is Effective

(*Continued from page 8*)

in the code are for the purpose of clarification. They result from the careful study which has been given the document since it was signed by the President.

Perhaps the most fundamental change in the marketing provisions is a proposal that the commercial discount be abolished. In Paragraph 7 of Rule 3 as originally approved, it is provided that "commercial consumers may secure gasoline, motor fuels and other oils, on contract quantity basis under conditions established by the Planning and Co-ordination committee."

The committee spent considerable time in trying to work out price fixing provisions which would be more satisfactory than those in the original Sections 6 and 6a. Some tinkering was done with the 18.5 ratio between crude and gasoline but thus far the ratio is said to have stood up.

In its present tentative form the price-fixing provisions call upon the federal agency designated by the code to determine the cost of producing, refining and marketing oil and its products. After these are promulgated it would be unfair, under the proposed section, to buy or sell at less than the ascertained costs.

The committee, as appointed by the President, is strongly for price fixing, so it is reasonable to assume that it will work out new sections for the two which have been criticised widely even by those in favor of fixed prices. Whether they will be accepted by the government remains to be seen. Secretary Ickes made it clear that his present attitude merely is to watch to see what results are obtained through balancing supply and demand. He said he was not closing the door to price fixing in the future.

An immediate task of the Planning and Co-ordination Committee is to set up machinery for the enforcement of code provisions. This task will be taken up after the Labor Day holiday.

Sub-committees on production, refining and marketing were appointed before the committee adjourned Sept. 2 and these were instructed to work out plans and present them to the committee when it reconvenes the morning of Sept. 6.

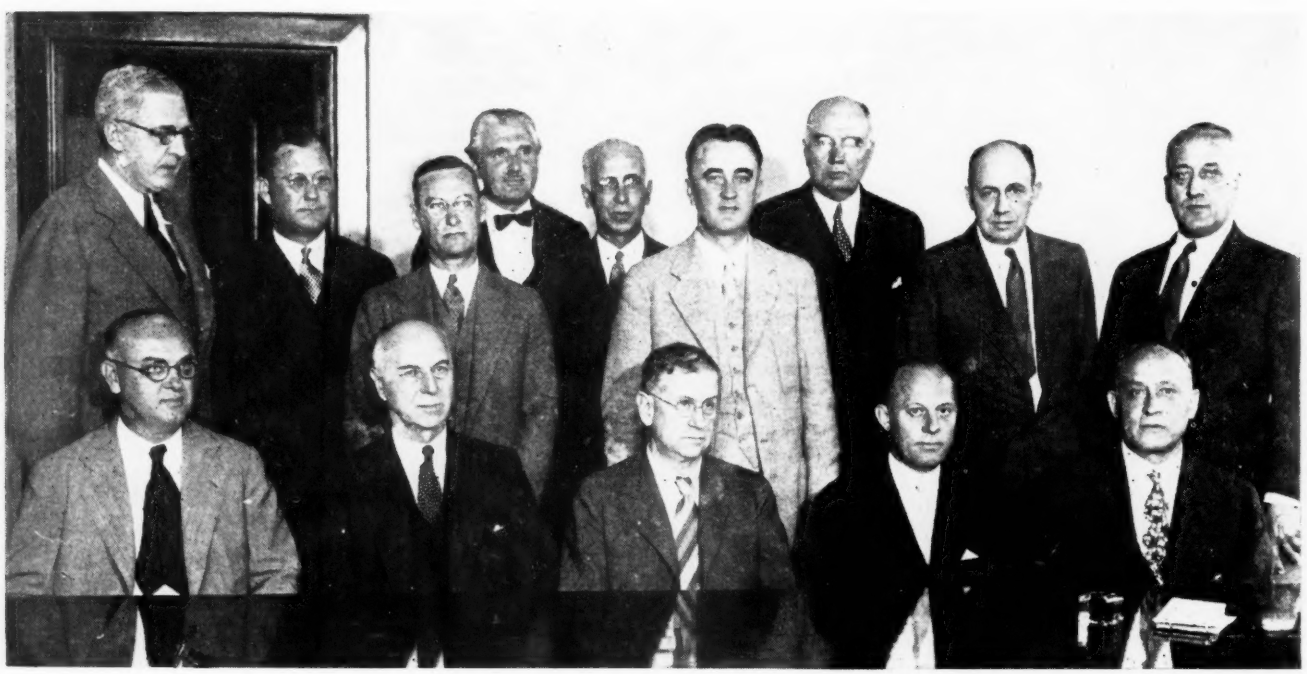
Forecasts are that code committees will be set up in each state to help enforce marketing rules. The state committee would receive complaints, iron out what differences they could and send others on to the main committee at Washington, or Chicago, wherever it sets up its permanent headquarters. Chicago is favored by the oil men because it would save a great deal of traveling time for most members.

In addition to the state marketing committees it is suggested that a separate system be set up for refining districts and producing states.

Sessions of Oil Committee Resumed in Washington

By Telegraph

WASHINGTON, Sept. 6—The Planning and Co-ordination Committee, of the administration of the petroleum code under the NRA, resumed its deliberations today, after a recess from last Saturday. It heard reports of statistical and technical advisory sub-committees, which had been working over the weekend on problems which confront the industry before the



Keystone View Co.

Planning and Co-ordination committee under the new oil code at its first meeting at Washington. Seated left to right: Charles F. Roeser, M. L. Benedum, Secretary of the Interior Ickes, James A. Moffett, E. B. Reeser. Standing: W. T. Holliday, Howard Bennette, Ralph T. Zook, Charles E. Arnott, Henry M. Dawes, Wirt Franklin, Amos L. Beaty, Donald L. Richberg, and Axtell J. Byles. K. R. Kingsbury and B. L. Majewski did not arrive in time for the first meeting

oil code can be completely put into effect.

Organization of the committee on a permanent basis has been discussed but no action taken towards selection of a permanent chairman. Action concerning the several permanent sub-committees provided for in the code will await selection of the chairman.

There is a possibility that some of the administrative and advisory machinery will be different from that provided for in the code as approved Aug. 19. Secretary of the Interior Ickes, designated Federal Oil Administrator by the President, will have a technical advisory body to assist him, but details of the nature of this body have not yet been announced. It is reported, however, that oil industry lawyers will be selected, as well as men acquainted with operation of the various divisions of the oil industry.

Oil men who are in Washington generally believe the crude oil production allotments promulgated by Secretary Ickes Sept. 2, to become effective Sept. 8, are a good start. It is generally believed these are experimental and that they will undergo revisions at the end of 30 days.

O. D. Donnell, president, Ohio Oil Co., believes the allocations well considered but believes a future revision may have to be downward. A. E. Faine, Ohio producer, believes the figure set for Texas is too high and will permit Texas crude to demoralize markets elsewhere. He also thinks production in eastern fields should be higher.

Texas Co. Meets Crude Raises

NEW YORK, Sept. 6.—The Texas Co. met the Humble, Stanolind and Carter crude oil price schedules in fields where it purchases. The only exception in these schedules is in the Gulf Coastal fields, where Texas Co. posts several higher grades than Humble. Its schedule begins with below 20 gravity, at $0.54, plus 2-cent differtial to 30-30.9, which is $0.76, and 1 cent differential from then on, to top grade of 40 and above, which is $0.86.

Texas Overproduction to be Classed As "Hot Oil", Ickes Warns

Bulletin

TULSA, Sept. 6.—Reports reaching here late today are that the Texas Railroad Commission has issued a temporary order effective Sept. 8 reducing all pool allowables 25% pending the Sept. 16 hearing.

By Telegraph

WASHINGTON, Sept. 6. OIL produced in Texas in excess of the quota set for that state by Secretary of Interior Ickes under the petroleum code will be treated as "hot oil" and its shipment in interstate commerce will likely be dealt with under the anti-hot oil shipping regulations on and after Sept. 8.

The allocations for the oil producing states were announced by Ickes Sept. 2, and become effective Sept. 8.

Ickes made known today he will not dally with a state, in answering a request of the Texas Railroad Commission for a delay in the effective date of the crude oil production quotas for that state from Sept. 8 to Sept. 16. The Texas commission Sept. 5 announced it would hold a general proration hearing on this latter date.

Ickes asked the commission to issue a temporary order pending its hearing, as a preference to procedure by the petroleum administration under Sections 3 and 4 of Article 3 of the code.

Under these sections the President, or his agent, may set a quota for a state. This quota then becomes the operating schedule of the industry in that state. The President may regulate shipments of petroleum and its products from states that fail to comply with the quotas announced.

The Texas Railroad Commission, in a telegram to Secretary Ickes, pleaded that, under Texas law, the commission must give 10 days' notice of a hearing in order to make its orders legal. It was stated that Sept. 16 was the earliest possible date.

"It is our earnest desire to cooperate with the administration insofar as is legally possible for us to do," the telegram concluded. "Any suggestions that you care to make will be highly appreciated by us. We would be glad to have some one familiar with the facts to testify as to market demand at our hearing."

Secretary Ickes' reply read: "Your telegram received. It has been definitely understood, during and since oil code hearings, you had called hearings after statutory notice and these hearings had been continued from time to time, awaiting code approval and certification of allocations, so that Texas Railroad Commission might take immediate action.

"In view of this, and also because of the nation-wide emergency and necessity for uniform effectiveness of allocations Sept. 8, will you follow your precedent and issue temporary order in accordance with certification under code pending formal hearings. Prefer this action rather than for Federal agency to proceed further under Article 3, Sections 3 and 4 of the code. Appreciate your co-operation and early reply."

Proration Action in Texas Delayed to Sept. 16

By Telegraph

HOUSTON, Sept. 5.—The Texas Railroad Commission has called a state-wide proration hearing for Sept. 16 to consider allocations to the various fields under the Texas allotment announced Sept. 2 by Harold L. Ickes, federal oil administrator.

Date of the hearing is eight days after the federal allocation goes into effect.

The commission gave no suggestion about reduction of output in line with the 975,200-barrel allocation except to pass the buck to purchasing companies which have no set-up for unified action in the period mentioned.

Advocates of Price Fixing Control Code's Planning Committee

WASHINGTON, Sept. 2

CONSERVATION and price fixing elements in the oil industry won a signal victory in the selection by President Roosevelt of the 12 oil representatives of the Planning and Co-ordination committee, to administer the new oil code. The insurgent East Texas element represented by the Blalock independents was not given a place on the committee.

In most quarters it had been conceded that the President would appoint at least one man to represent the Blalock faction. Instead, Charles F. Roeser, president of the Texas Conservation Association and a vice-president of the American Petroleum Institute, an ardent worker for proration, was named to represent Texas producing interests.

Seven of the 12 men selected by the President were members of the executive committee of eight of the Emergency National Committee of 54 named after the Chicago code conference to administer the code. H. F. Sinclair was the only member of the committee of eight who was not given a place on the new committee.

The 12 men selected by the President include Axtell J. Byles, president of the American Petroleum Institute; K. R. Kingsbury, president of the Standard Oil Co. of California; W. T. Holliday, president of the Standard Oil Co. (Ohio); Wirt Franklin, president of the Independent Petroleum Association of America; Howard Bennette, president of the Western Petroleum Refiners Association; Ralph T. Zook, president of the Pennsylvania Grade Crude Oil Association; B. L. Majewski, receiver for the Deep Rock Oil Corp., Chicago, and representative of independent jobbing interests in the middle west; Amos L. Beaty, former A. P. I. president; E. B. Reeser, president Barnsdall Oil Corp., Tulsa, and former A. P. I. president; C. E. Arnott, president Socony-Vacuum Oil Corp.; Henry M. Dawes, president Pure Oil Co. and Mr. Roeser.

The industry is fortunate also in having two experienced oil men among the three appointed by the President to represent the government on the committee. They are James A. Moffett, former senior vice-president of the Standard Oil Co. (N. J.), and M. L. Benedum, Pittsburgh. Only Donald L. Richberg, chief labor counsel for the NRA., is not an oil man.

Appointments to the committee were announced by the President at Hyde Park late Aug. 31 and the following afternoon all but two were on hand for the first meeting. All had been notified to hurry to Washington, however, before the nominations were made public.

Mr. Majewski flew to Washington and was held up by bad weather at Pittsburgh so that he did not arrive until late Aug. 31. Mr. Kingsbury arrived the following morning by flying from California.

Once assembled, the committee worked with the utmost harmony after being greeted and having its picture taken with Secretary Ickes, who then withdrew. He left his assistant solicitors Charles Fahy, Howard Marshall and Norman Meyers as his personal representatives in addition to the three government members of the committee. Marshall and Meyers recently have represented Ickes in enforcing the President's "hot oil" order in East Texas.

Because only two days remained after the first meeting before the code was to be effective the committee worked night and day. The first night it worked through until 3 a.m. At 10 that same morning it was back at work and stayed on the job until 4 a.m. Sept. 2 except for short periods out for meals. Even after these two strenuous days the committee spent most of Saturday in the big bare office on the fourth floor of the Interior Department building.

The committee has been so busy trying to get the code in order to become effective and in working out production allotments that it has not completed a permanent organization. At the first meeting Axtell J. Byles was made temporary chairman and Russell B. Brown, formerly secretary of the Committee of 54 and Washington counsel for the Independent Petroleum Association of America, was made temporary secretary.

Permanent organization of the committee, selection of subcommittees and arrangement for the setting up of offices is expected to be undertaken immediately after Labor Day. Another task will be the setting up of state and regional committees to aid in administration of the code.

Minimum Price Problem Put Up to NRA

By Telegraph

HOUSTON, Sept. 6.—A dozen Houston jobbers met here Sept. 5 with NRA mediators to serve notice that they were compelled to meet cut price competition unless stations now selling gasoline at 11 to 12 cents raise their prices. The mediation board replied that it had no machinery for enforcing minimum prices but that it was asking Washington to meet the situation.

The jobber delegation was headed by W. C. Gaylor, Gaylor Oil Co.; H. W. Smith, Bay Oil Co.; and S. J. Helton, Ranger Oil Co.

Kansas to Conform To Code Quota

By Teletype

TULSA, Sept. 6.—Gov. Alf. M. Landon, of Kansas, in a long telegram to Secretary of the Interior Ickes today, commended Ickes' policy as Federal Oil Administrator in allocating to oil producers nearly all the estimated demand, under the provisions of the oil code, and in restricting withdrawals of crude oil from storage.

He also suggested that the

federal authorities investigate the long time contracts for crude oil made at distress prices.

Chairman Homer Hoch, of the Kansas Corporation Commission, also wired Secretary Ickes, stating that that body would co-operate with him to the fullest extent and that Kansas would have no difficulty in reducing its current output by the necessary 18,000 barrels daily to bring it to the suggested quota of 111,000 barrels daily.

Oklahoma Accepts Its Quota Of Daily Oil Output

By Teletype

TULSA, Sept. 5.

IN connection with the Continental Oil Co.'s posting of what to it is a 20-cent advance in crude oil prices in Oklahoma and Kansas and a 10-cent advance above the prevailing market, D. J. Moran, president, issued the following statement:

"Subsequent to our first announcement relative to Continental Oil Co.'s position on crude prices, the President named the oil code Planning and Co-ordination Committee. This company is pleased with the selection made and anxious to co-operate in every way with its activities and does not wish to be in conflict with the committee's deliberations. The oil producing states have now received their suggested allocations and it is hardly conceivable that any state will refuse to give them immediate support and a fair trial."

The next paragraph contained the announcement of price increase and the statement concluded with: "The 10-cent increase over that now generally paid by major buying units will compensate for the delayed decision on our part and is in anticipation of an early upward adjustment of these prices when the oil producing states have acquiesced in Secretary Ickes' pronouncement, or in an equitable substitute for it."

The Oklahoma Corporation Commission lost no time in accepting the quota of crude oil allotted to that state. Chairman Paul Walker Sept. 4 said the 540,000 barrels daily maximum for the state would become effective Sept. 8. This is a reduction of 61,569 barrels from the September allowable previously set by the commission. Reductions will apply only to present prorated areas.

Walker said a public hearing will be held Sept. 15 to hear protests as to details of the reduction in allowable. Early estimates were that Oklahoma City production would be cut about 36,000 barrels daily, Seminole District 20,000 and other prorated fields 3600. These are approximate figures.

Walker asserted that the commission feels immediate acceptance of the allocation is necessary. "If our acceptance will speed the recovery of the industry, bring about a higher price quicker or serve to show confidence in other areas, we are pleased to do it. I hesitate in placing the state on record first but I feel that the other states, especially Texas and Kansas, will follow immediately."

For North Texas fields the Continental's new posting met the price of other buyers and was 10 cents lower than the price it posted in Oklahoma and Kansas.

California Relinquishes Voluntary Proration, Under Oil Code

LOS ANGELES, Aug. 31

WITH total production of crude oil in California reported as 501,693 barrels on Aug. 30, 42,000 barrels in excess of the total allowable under the state's voluntary curtailment program, California operators are looking forward to stabilizing effects of the national oil code.

It was the opinion that the Planning and Coordination Committee in Washington will establish a production quota for California of from 460,000 to 480,000 barrels a day.

This, it is expected, will represent the actual market demand for petroleum and its products by the natural Pacific Coast markets, although it would exclude movement of California produced products through the Canal to the Atlantic Seaboard. However, a compensating factor would be the exclusion of Texas and Mid-Continent-produced products from Oriental export markets.

It is also generally conceded that, in lieu of a proration enforcement agency in California, the Central Proration Committee, which is the hub of the state's voluntary curtailment program and is representative of major and independent oil producers, will be delegated by the Federal Oil Administrator with the power to establish schedules of production for the various fields in California.

J. R. Pemberton, state oil umpire, ordered September production schedules held up over the Labor Day week end, and expects to release them Sept. 5 on the basis of the new schedule of the Planning and Coordination committee.

Month-end shut-down of wells in many of the settled San Joaquin Valley fields helped to keep California crude production to within 40,000 barrels of the voluntary allotment. These fields, with the exception of Kettleman Hills and one or two less important districts, usually produce their quota in the first half of the month and shut down for the remainder.

Although there is much confusion as to the oil code and its probable interpretation, leaders in the Pacific Coast oil industry look to its enactment to eliminate the state's overproduction and the associated evils of unstabilized refined oil markets.

Suspension of Texas Anti-Trust Laws, During NRA, is Asked

HOUSTON, Sept. 2

SUSPENSION of the Texas anti-trust laws, so that the state's industries may participate fully in the federal NRA program, is in prospect at the forthcoming special session of the legislature, to be assembled in the next two weeks.

Petroleum and other industries would be affected by a measure submitted to Governor Ferguson by General Hugh S. Johnson, of Washington, which the Texas executive in turn is expected to submit to the legislature.

The measure would make every person and firm engaged in purely intrastate business subject to the terms of the NRA, on penalty of heavy fines, and would exempt them from the Texas anti-trust laws, for the effective period of the NRA.

A similar bill, under preparation by Representative Rolland Bradley, of Houston, contains a clause which would keep in effect the state's suit against 15 principal oil companies and two trade associations, based on Attorney General Allred's charge their violation of the Texas anti-trust law was through application of a marketing code in the past. This suit, which asks $17,500,000 penalties, is to be called for hearing Oct. 2.

The effective date of the petroleum code, Sept. 2, found the principal oil interests in the state doing what they could to comply with its provisions; but awaiting from Washington details, such as allocations of production quantities, and price adjustments.

As compared with present Texas production exceeding 1,200,000 barrels daily, the NRA allocation to the state was 975,200 barrels daily. Conforming to the NRA quota calls for substantial reductions in production quantities. Where else than East Texas any material reduction could come from was not apparent. The fields of high potential production elsewhere in the state have been exploited conservatively since their inception, and the old settled areas are not susceptible of reduced yields.

Railroad commission authorities have been consistent only in one thing in their proration activities the past two or three years. That is their effort to give East Texas as large a crude oil outlet as possible. Some of this agency's members have been recently insistent on the NRA administration only "recommending," instead of stipulating, state quantities of production.

Aug. 31, the commission reinstated its rule permitting the running of back allowable oil in East Texas, effective Sept. 1, but immediately revoked it again. The commission said, before the revocation, it would consider applications of operators who could not run or sell their oil under old daily allowables, announcing also this would apply to those who refused to market their production when the price was 10 cents a barrel.

Running of back allowable quantities of crude oil in East Texas has been under suspension since July 1, prior to which time the amount involved ranged from 30,000 to 60,000 barrels daily.

Pipeline Rates in Texas Ordered Cut Dec. 1

By Telegraph

HOUSTON, Sept. 6.—Effective Dec. 1, the Texas Railroad Commission, Sept. 5, ordered sharp reductions in common carrier pipeline rates for shipments within the state.

The rate from East Texas to Gulf Coast destinations was ordered cut from the present 30 cents to 22.5 cents a barrel and the rate from West Texas from 52 cents to 37.5 cents. Reductions from other producing territories were proportionate.

In South Texas the rates were reduced one to 9 cents a barrel on the basis of equalization to Beaumont and Houston.

The existing two per cent strapping deduction was reduced to one per cent. The one per cent pipeline loss allowance was unchanged.

Field Workers in Smackover Strike

By Teletype

ELDORADO, ARK., Sept. 6.—Sixty-five employes of the production department of Simms Oil Co. here failed to report for work Sept. 5 in the Smackover field and the company's properties were shut down pending a settlement of wage difficulties. The workers asked a monthly rate of $100, instead of the 55 cents an hour specified in the oil code.

S.O.NewJersey,Louisiana, Indiana Raise Gasoline

CLEVELAND, Sept. 6.—Late today Standard Oil Co. of New Jersey and Louisiana announced that, effective Sept. 8, they would advance tank wagon and service station prices of gasoline, all grades, 1 cent through their respective territories.

The Standard Oil Co. of Indiana announced that, on Sept. 7, it would advance tank wagon and service station prices of all grades of gasoline, 0.5 cent through its territory, including normal and subnormal points. The margin to uncontrolled dealer accounts on Ethyl and regular gasoline will be increased 0.5 cent, to 3 cents, and on third grade, to 2 cents, Sept. 8. On Sept. 1 the company had made these changes in discounts to triple A and controlled dealer accounts.

On Sept. 2 Continental Oil Co. advanced all grades of gasoline 0.5 cent through its territory. On Aug. 30 the company had advanced all grades 1 cent, in Colorado, Wyoming, Utah, southern Idaho and Montana, and third grade 0.5 cent at Albuquerque, N. M. The Aug. 30 and Sept. 2 advances are reflected in the prices in the tank wagon table in this issue.

To Beat the Code, Texas Gasoline Rolls From Plants, To Buyers Unknown

By T. W. Watson
Platt's Oilgram Representative

CHICAGO, Sept. 2.

THE general assumption among the oil trade that the President would set a base price for gasoline in tank cars, of 5 to 6.5 cents a gallon along with a price of $1.00 to $1.11 a barrel for 36 gravity Mid-Continent crude oil, as soon as the oil code became effective, has led to considerable speculation in tank car gasoline.

This speculation has taken several forms, among them the shipping of gasoline to certain so-called "hold tracks" at points in Illinois, Missouri, Arkansas and the southeast. These hold tracks generally being sidings leased at some railroad center.

This practice of buying gasoline and having it shipped to a leased track has not been an uncommon one among the carlot marketers for some time. Among the points commonly used for this purpose is Dupo, Ill., a small town adjacent to East St. Louis. Having the gasoline shipped to himself in this manner, enables the reseller to give instructions when ordering from the refiner and get the benefit of a discount, or oftentimes get a better price, especially when the refiner is badly in need of shipping instructions.

Shipment can then be made later from Dupo and the "through freight rate" protected if the gasoline is consigned to a buyer in Illinois, Indiana, Ohio, Michigan and parts of Wisconsin and Minnesota, except where a back-haul is involved. The only added expense to the sale being a reconsigning charge of $6.30 a car. Although, generally speaking, most of the carlot marketers do not hold the gasoline at Dupo very long, there have been reports of gasoline being held there for two months or longer.

No absolutely authentic reports as to the total amount of gasoline being held on track at these "hold points" could be obtained, but it was variously estimated by many as being around 1500 cars (12,000,000 gallons). Of this total, between 400 to 600 cars was reported being held at Dupo.

Of the gasoline at Dupo, 150 cars is reported to belong to one Texas refiner, with the remainder belonging to other refiners and carlot marketers.

Traders here were doing considerable speculating as to the status of this gasoline under the new oil code. From the carlot marketers point of view, it appeared to be solely a proposition of buying at a fairly low price and holding the gasoline until the President set the base price at a figure which they hoped would be considerably above the price paid.

The gasoline still belonging to the refiners, however, was on a different basis. Several reasons were voiced as to why they shipped material to themselves at Dupo. One was that these refiners had no great amount of plant storage and, being of the opinion the market price would move higher, had used this means of having a supply closer to the heavy consuming centers of the middle west. Another reason was that, if restrictions are placed on withdrawals from storage, it might not apply to this material.

One or two traders said they believed if the President did set a base price for gasoline, it would not apply on material already shipped from the refinery, and therefore this gasoline held on siding at Dupo and other points would not be affected by the base price.

However, this interpretation of gasoline affected by any base price set by the President, was not the one held by most of the trade. They were of the opinion that the part of Section 6A in Article 3 "If and whenever the President shall prescribe a base price for gasoline it shall be an unfair trade practice to buy, sell, give or receive in exchange or otherwise dispose of or acquire such gasoline at a lower price," adequately covered any and all tank car gasoline sales.

The effect this gasoline on the "hold tracks" will have on the general tank car market is a matter of concern to Mid-Continent refiners. On some of this gasoline the Federal tax of 1.5 cent a gallon will shortly be due. An East Texas refiner was offering gasoline out of Dupo on Sept. 2 at 3.875 cents per gallon.

It was reported that some refiners, who had sold gasoline to resellers, who in turn had shipped it to these sidings, were beginning to complain about the cars being tied up too long and were asking for a prompter return of their empty cars. The question also is being raised as to whether the railroads are permitted to lease tracks for the storage of flammable liquids.

Hadlick Calls National Oil Marketers Meeting

WASHINGTON, Sept. 5. — The organization meeting of the National Oil Marketers Association will be held at Palmer House, Chicago, Oct. 5, according to Paul E. Hadlick. Mr. Hadlick resigned Aug. 1 from the secretaryship of the American Petroleum Institute's division of marketing to form a national association for oil marketers.

The meeting will be held to adopt bylaws, elect officers, and lay plans for future activities of the association. Oil jobbers and executives of state and local associations are invited to attend.

A session will be devoted to the marketing provisions of the oil code. The code will have been in effect a month by that time and a discussion as to its workings will prove beneficial, Mr. Hadlick points out.

The association now has offices at 1389 National Press Bldg., Washington.

Oil Executives Praise Allocation Order of Secretary Ickes

CLEVELAND, Sept. 6

OIL company executives in the Mid-Continent today were telegraphing Harold L. Ickes, federal oil administrator under the new code, congratulating him on the start which has been made in balancing oil supply and demand through the allocations announced Sept. 2.

L. R. Crawford, former president of the Western Petroleum Refiners Association, and P. C. Spencer, receivers for Producers and Refiners Corp., sent the following:

"Please accept our thanks upon what we consider to be a constructive domestic production program. Success of the plan now depends primarily upon vigorous enforcement of allocations made. Sincerely hope you will use full powers of your office to that end."

W. G. Skelly, president of the Skelly Oil Co., sent the following:

"Please permit me to commend cordially your decision to bring about an effective balance of petroleum supply and demand and see whether prices do not right themselves by ordinary economic processes before you apply fiat measures. I do however question most respectfully whether you have not set the national production figure too high. Without knowing the basis of your calculation I am inclined to think 2,410,000 barrels is at least 150,000 too much considering all factors including the time of year.

"Of course economic processes will not raise present low prices adequately unless supply is so curtailed that it is neither plentiful nor easy to obtain. I appreciate your interest and desire to be helpful and pledge my co-operation with yourself and your excellent Planning and Co-ordination Committee."

J. Steve Anderson, president of the Anderson-Prichard Oil Corp., Oklahoma City, sent the following:

"Our company is a large producer of crude oil in the Oklahoma field. We wish to heartily endorse your fair action in allocating production between the various states. We pledge our support in your effort to stabilize the industry."

Dan Moran, president of Continental Oil Co., sent the following telegram to Ickes:

"In your pronouncement of state allocation of oil production your fairness should be unquestioned by regulatory bodies whose co-operation you are seeking. Oil producers will undoubtedly give you in this program unlimited support. The initial action taken by you is indicative of the excellent judgment of President Roosevelt in naming you as the administrator of the oil code. The Continental Oil Co. tenders full co-operation in the deliberate and constructive measures you have adopted for this industry."

Responding to a request from NATIONAL PETROLEUM NEWS for a statement of their views regarding the action of Secretary of the Interior Ickes, a number of other representative oil men in all branches of the industry have wired the following comments:

E. G. Seubert, president of Standard Oil Co. of Indiana, wired that "I believe the order allocating crude should have a good effect on the industry providing the states make Secretary Ickes' order effective promptly."

C. B. Ames, chairman of The Texas Co., expressed some concern over the amount of the allotment in the following wire: "I am afraid that the total allowable fixed by Secretary Ickes is too high, particularly as we are emerging from the season of greatest demand."

J. D. Collett of Fort Worth, president of the Mid-Continent Oil & Gas Association, wired: "the order of Secretary Ickes allocating to the various states their quotas of crude oil production under the oil code will, I believe, put the industry promptly on the road to the stabilization we have hoped for. Some changes may have to be made, but the machinery has been set in motion and can be tuned to meet the demands of the situations as they become apparent. The Planning Committee is composed of men who are both competent and earnest and with their co-operation I have every confidence that the administration will give us what we need to put the oil business on a safe and sound basis. We are definitely in sight of better days."

H. A. Logan, vice president of the United Refining Co., Warren, Pa., wired: "I believe that the 2,409,000 barrels daily crude production allowable ordered by Secretary Ickes for the month of September will be substantially in line with the requirements during this test period and that the allocation to the various states is fair and equitable. Secretary Ickes is to be commended for taking this courageous step looking toward stabilization of the industry."

E. V. Weber, Cincinnati, president of the Ohio Petroleum Marketers Association, wired: "To me it seems obvious that one of the fundamental reasons for the demoralized conditions within our industry is and has been due to over-production of crude oil and the utter impossibilities on the part of the industry to balance production with demand due to the potential. Secretary Ickes' order allocating crude should in effect lead us to a method of preserving this natural resource and if crude is allocated in a proper relation to demand should result in bringing about a large measure of stabilization within our industry. Of course the success of the plan depends largely upon the methods to be used in arriving at the amount of crude to be allocated to the various producing areas and the amount of interference with the program from political forces."

J. A. Motter, secretary, Kansas Oil Men's Association, wired the following: "Secretary Ickes' order allocating crude will help some, but in our opinion the price must be regulated clear down to the pump before recovery in the oil industry will be had."

Benedum, Government's Representative, A Pioneer Oil Producer

WASHINGTON, Sept. 2

APPOINTMENT of Michael L. Benedum as one of the three government representatives on the Planning and Co-ordination Committee under the oil code, gives the industry two experienced oil men out of the three. The only one not an oil man is Donald L. Richberg, labor representative of the NRA.

"Mike" Benedum, of the Benedum-Trees interests at Pittsburgh, has had 44-odd years experience as a wildcatter and producer in the principal eastern, central states and Mid-Continent states, as well as in South America. He began as an employe of the Standard Oil Co. in West Virginia in the late 1880's. After a few years he started as an independent producer in the Sistersville district, of West Virginia, with his brother Charles.

After the death of his brother Mr. Benedum teamed up with J. C. Trees, who had come into the field as a tool dresser after graduating from the University of Pittsburgh. This association has continued since the Benedum-Trees Oil Co. was organized in 1900.

An early project of the two was the leasing of a large area in Illinois where the Casey field was subsequently brought in. From Illinois the two began leasing in Louisiana and in the Cleveland district of Oklahoma. On their Louisiana leases the Caddo field was developed in the period from 1906 to 1909.

In 1916 Benedum-Trees organized the Tropical Oil Co. to operate a large concession in Colombia, South America. This later was sold to the International Petroleum Co., Standard Oil Co. of New Jersey subsidiary. The Tropical properties have produced an average of 50,000 barrels of oil per day for 14 years.

Although Messrs. Benedum and Trees normally operate together, this was not the case in 1919 when the Transcontinental Oil Co. was organized. In this company Mr. Trees did not take an interest. Transcontinental became an integrated company, with refineries and distribution as well as production, but did not make a great success until in 1926 and 1927 when it discovered the Nigger Creek field and the Yates field in Pecos County, West Texas. In 1930 Transcontinental was merged with Ohio Oil Co. on a stock exchange basis.

The Benedum-Trees interests discovered the Big Lake field in Reagan County, Texas. Plymouth Oil Co. is the Benedum-Trees holding company which owns a three-quarter interest in the Big Lake Oil Co., operating company. Continental Oil Co. owns the remainder.

Mr. Benedum has been a lifelong Democrat but did not become active in politics until the 1924 presidential campaign, when John W. Davis from his home county in West Virginia, was the Democratic candidate for President. In the last campaign he was an ardent supported of Roosevelt both before and after the convention.

Mr. Benedum has no hobbies except the oil business and his home "Greystone" at Fifth and Highland, Pittsburgh, near the Mellon residence. He is not a golfer or a fisherman, although he usually spends some time in the winter at Miami Beach, Fla.

Hospitals and other welfare work have interested Mr. Benedum considerably. He has been a heavy supporter of the Emory Methodist church at Pittsburgh. Although he has not branched out into other industries Mr. Benedum did take an active part in the bank crisis in Pittsburgh in 1931.

Labor Rules Apply to Commission Stations, Marketers Hold

SPRINGFIELD, Ill., Aug. 30

THAT truck drivers qualify as outside salesmen and service station employes on a commission should be placed under the maximum hours and minimum wages of the oil code were opinions given at the meeting of the Illinois Petroleum Marketers Association, here Aug. 30.

The meeting was to study specific problems as to the application of the letter and spirit of the code.

I. A. Archambault, Pennsylvania Oil Co. of Evanston, Evanston, Ill., and president of the Illinois association, presided. B. L. Majewski, Deep Rock Oil Corp., Chicago, and a member of the Planning and Co-ordination Committee, attended and joined in the discussions.

The meeting was open to all marketers, and more than 800 jobbers and dealers attended, many being unable to get into the convention room.

Application of the code to employment, and the status of the oil peddler, were the major points of discussion.

Questions on the lease and agency were in two groups. No opinion was ventured on hour and wage conditions where only two parties were involved in a lease and agency agreement. Where three parties were involved, such as the owner of the land or building making a lease but a third party actually operating the station, the opinion was that maximum hours and minimum wages applied.

The logic on the employment situation was that the whole spirit of the Recovery Act is to provide spending power to the now unemployed, by increasing employment and shortening working hours.

The opinion on the status of the oil peddler, who drives to a bulk plant for a load of oil products then retails his merchandise, is that he is definitely out of the marketing picture under the code.

Oil Code is Principal Topic For Refiners' Meeting

WASHINGTON, Sept. 2

THE Code of Fair Competition for the Petroleum Industry," and its effect on various branches and departments will be the main topic of discussion at the 31st annual meeting of the National Petroleum Association at Hotel Traymore Atlantic City, Sept. 20-22. Preliminary announcement of the program has been made by Fayette B. Dow, general counsel for the association.

Chas. E. Arnott, president, Socony-Vacuum Oil Corp., of the Planning and Co-ordination Committee, under the code, will present the provisions and effect of the marketing code. In addition, prominent oil men from the various refining districts in which the association members are located will discuss the code as applied to these specific districts. Wage schedules will be discussed and explained by a member of the National Recovery Administration and will include a comparison of the important provisions on this phase of the Recovery Act with similar provisions in codes of other industries.

James H. Herbert, Standard Oil Co. (Ohio) president of the Fire and Safety Marshals Division of the National Petroleum Association, will show the effect of the N. R. A. and the code on fire and and accident costs. Other speakers will take up different phases of the code, and discussion will aid in clarifying its working as it affects each branch of the industry.

Details of the group conferences on gasoline, lubricating oils, and other technical problems have not been completed. Willis Crane, associate counsel of the association, will explain and discuss in general Treasury Department regulations governing the taxation of lubricating oils and motor fuels by the Federal government.

The opening general session's address will be by E. M. Lyons, widely known president of the association. Discussion of the degree of modification of the anti-trust laws effected by the National Recovery Act will be given during the meeting, a matter of major importance to the industry.

Baird H. Markham, head of the American Petroleum Industries Committee, who has been managing this work for less than one year, will show what this organization has done on federal and state taxation matters during that time.

Dr. Joseph E. Pogue, petroleum economist well known to the industry, who has been carrying out economic studies of the N. R. A., will again discuss the economic outlook for the oil industry.

The annual Fellowship Dinner will be held the evening of Sept. 21st.

Workers Being Organized in Active Refining and Producing Districts

TULSA, Sept. 2.

CONFLICTING claims as to the progress made in organizing oil field and refinery employes makes it difficult, at this time, to get an accurate idea of the number actually coming under the banner of union labor, through the labor provisions of the oil code.

G. Ed Warren, president of the Oklahoma Federation of Labor, asserts that, in the past month, some 3000 new members have been added to unions in Oklahoma alone, a large number coming from the oil industry. The most intensive part of the campaign for new members is now going on in the oil fields and refinery districts.

Organizers are working in Kansas, Oklahoma and East Texas. It is understood to be their intention to carry the campaign to all sections where a substantial number of men are employed.

A few attempts were made, early after the passage of the National Industrial Recovery Act, to organize "wildcat" unions here and there, especially in districts containing large numbers of unemployed field workers. However, these have generally died down and the Oil Field, Gas Well and Refinery Workers of America is the union that is setting up the chapters here and there.

This is not a new organization. It was known at least 15 years ago but, up to recent weeks, has had little but its name except in California. During and immediately after the War it established locals in that state, tried, unsuccessfully, to get a foothold in Texas. Not all the attempts to form unions, however, were made by this organization.

The American Federation of Labor is back of the present campaign and the Oil Field, Gas Well, etc. union is affiliated with the A. F. of L.

There is no evidence that the organizers have made representations that it is the intent of the NRA to promote unionization. Such reports were in circulation a short time ago. An organizer did say that formation of locals, enlistment of oil field and refinery workers in the ranks of organized labor, had been made quite easy by the radio talks of national administration leaders. Demands for organizers to assist in forming locals come in faster than they can be handled, he said.

Some nine or 10 charters for locals in Oklahoma have been issued or will be shortly, labor leaders say. There is a claimed membership in Seminole of 700 to 900, estimates vary and access to the lists being forbidden. Some 300 are claimed in Okmulgee, where the membership consists chiefly of refinery workers. In Seminole, the membership came from the field workers.

Organization work is under way in such refining districts as

Tulsa, Enid, Ponca City and Barnsdall, Okla., and in the general area around Wichita, Kans. Observers report that refinery workers generally show more enthusiasm for organization than do such classes of field men as drillers and tooldressers. If this be true, the reason is obvious. The driller and the tooldresser or rotary helper of today is the drilling contractor of tomorrow. Frequently they become producers. Seldom do they expect to spend all their days at wage-labor. The refinery worker lacks such opportunity to launch his own business.

Many field men who have joined the union in the Seminole district have been unemployed for considerable time.

The Seminole oil field local, which is No. 209, of the Oil Field, Gas Well and Refinery Workers of America, drew up a scale of wages and sent it to NRA in Washington. It declared for a 6-hour, 6-day week and proposed that daily pay should be as follows:

Cable tooldressers	$11.95
Rotary helpers	11.95
Rig builders, pushers	12.95
Rig builders	11.00
Rig builders, helpers	7.35
Tank builders, pushers	11.95
Tank builders	10.00
Tank builders, helpers	7.35
Truck drivers	8.05
Truck drivers' helpers	7.00
Common labor	5.95

Casing crews, same as tooldressers, with double pay on wet strings.

Such a scale differs radically from that proposed in the code drawn by the recently organized Oklahoma-Kansas Drilling Contractors Association.

The title of the oil workers' union does not embrace filling station or other marketing division employes. Whether provision will be made for them is an unsettled question, according to organizers. Neither has any arrangement been made to form separate locals according to crafts. Mr. Warren said that it was the present intention to take all into one union and let them work out the jurisdictional set-ups for themselves. This, presumably, will be the manner in which unskilled workers, or common labor, will be handled also. These, obviously, cannot be taken into a group of artisans, such as stillmen or drillers, without doing violence to the structural plan of the A. F. of L., which has provided that certain requirements of a craft must be met before a worker can be a full-fledged member.

For the present, no distinctions are being drawn and anyone who wants to join comes in. Dues are $1.50 per month and these payments take care of death and sick benefits.

Possibility is seen that the Oil Field, Gas Well, etc. union will come to grips with management over the question of company unions. While, in no instance, is membership compulsory in the industrial organizations which have been set up by management—many of them dating back 10 years or more—union organizers contend that the designation of representatives by management in number equal to those selected by workers is a violation of the NIRA, Sec. 7-a.

Employers in the southwest are standing by and offering no resistance to the organizing work that is going on. They take the attitude that to pursue any other course would be to invite trouble, with labor as firmly in the saddle as it apparently is now.

Newest in Auto Accessory Line For Chicago Exhibit

CHICAGO, Sept. 2

THE growth of accessory sales through oil company service station outlets and the natural tie in of the progress of such sales with modern shop equipment for servicing, makes the Automotive Service Industries Show of unusual interest to oil marketers this year.

This exhibit, being held under the joint auspices of the National Parts Association, Motor & Equipment Manufacturers Association and the Motor and Equipment Wholesalers Association, is to be staged in the Merchandise Mart, Chicago, Oct. 30 to Nov. 3 inclusive.

The associations taking part recognize the importance of the oil marketing companies as purchasers and distributors of accessories through their stations, and as users of shop equipment for servicing automobiles and for the first time, at this year's exhibit, oil company executives having to do with operation of service stations are being invited to attend the exhibit in Chicago.

Statistics compiled by those in charge of this undertaking are interesting. Starting with the total motor vehicle registration in the country as of Dec. 31, 1932, the estimate is made that the average annual maintenance cost per car is between $85 and $109, the figures being based on research statistics of the Iowa State College of Agriculture and Mechanic Arts. This is exclusive of tires. For the average car, estimating $50 a year for service labor, there is left another $50 per car for maintenance supplies. Multiplied by the number of cars registered, the maintenance market runs over one billion dollars.

What portion of this huge market the oil marketing outlets now obtain is unknown, but, since every car registered must come into a service station at least once in every 200 miles run, it is likely that the service station is beginning to get its share. Officials of oil marketing companies are more and more realizing the possibilities of accessory sales through their already established outlets and many are now handling a complete line. Others have only been in the field a year or more but the results of even this short experience indicate future possibilities in this market.

The Automotive Service Industries Show will display all the latest devices, both in shop equipment and accessories, and oil men will be able to view the articles which have sales appeal as well as the equipment which would best aid in selling both service and accessories.

New Oil Test Correlating With Service is Announced

By Arch L. Foster
N. P. N. Staff Writer

CHICAGO, Sept. 4

A NEW oil stability test which appears to correlate closely with oil performance in service was announced here this week before the International Automotive Engineering Congress. This test, which is employed by its authors as a research guide in the manufacture and study of lubricating oils, promises to be a useful tool in the development of the new types of motor oils made practicable by new refining methods recently brought to the fore by American refiners.

Before the assembled engineers of a dozen countries the need to reach greater motor oil stability to meet the severe demands on the lubricant engendered by higher engine speeds and higher bearing pressures was emphasized. D. P. Barnard and associates of the Standard Oil Co. of Indiana research staff showed results of a new oxidation test developed as a guide to production of more stable motor oils, work in which that company has been prominent, in the development of new solvent processes during the last two years.

The Indiana oxidation test indicates that sludging of oils which renders them unfit for service is due to asphaltenes formed by oxidation in the crankcase. The new test differentiates between oils of varying susceptibility to oxidation in a degree which correlates well with service tests, and appears to be suitable as an indicator of refining excellence as well as a routine test to determine quality of commercial products. It consists essentially in heating a 300-cc. sample of oil at 341F. for an indefinite time, while air at the rate of 10 liters per hour is bubbled through. Samples withdrawn periodically from the tube are tested for sludge by precipitation with naphtha, and the time required to form 10 mg. of sludge per 10 grams of oil is determined.

High viscosity index and oxidation stability are generally considered the prime factors in oil quality. If this test correlates with service results it will be of inestimable value in determining refining efficiency and in differentiating refining methods, as well as in the selection of oils suitable for different purposes.

The American automotive engine, although a marvel of power and high performance, is too heavy, wasteful of fuel and wears out the car, according to statements by L. H. Pomeroy before the Congress which closed here today. Lighter metals, higher speed, less powerful engines, and more gear shifting are the solution of the problem in Europe.

The Fluid Flywheel is one of the coming developments in automotive equipment which will be a distinct step forward, automotive engineers stated at the Congress. Independent front-wheel springing is probably the most pressing problem, they believe. Rear-engined cars and streamline bodies are other needed developments, which may meet slow response from the buying public.

High-speed diesel engine problems being attacked by every important engine manufacturer in the country, and satisfactory solutions of most of them are under way, it was reported. Weight reduction, ignition troubles, starting difficulties, flexibility in operation are some of the problems in process of solution. Most of these are practically solved already, the engineers said.

Seventeen representatives of foreign automotive and aeronautical interests were in attendance at the Congress.

These included four men from Soviet Russian organizations; two each from Japan, Germany, France and Belgium; and one each from Roumania, England, Norway, Italy, and Austria.

Seven papers by foreign authors were presented during the meeting, extending from Aug. 28 to Sept. 4. These authors are M. Caquot, general technical director of the French Air Ministry; General G. A. Crocco, Research Head, Italian Air Ministry; C. R. Fairey of the Royal Aeronautical Society of England; A. H. R. Fedden, Bristol Airplane Co., Ltd., England; Dr. Wilhelm Hoff, Berlin, Germany; R. Wada, Director of the Aeronautical Research Institute, Tokyo Imperial University, Japan. L. H. Pomeroy, managing director of the Daimler Co. Ltd., (England) gave a talk on "What is the Matter with American Cars."

Nebraska Jobbers Favor Full Price Fixing

By Telegraph

LINCOLN, NEB., Sept. 6.—Nebraska jobbers were virtually unanimous in favor of complete price fixing at a special meeting of the Nebraska Petroleum Marketers, Inc., called to discuss the new oil code. Only a few votes were against price fixing out of 500 jobbers in attendance.

Rules of the new code were read to the jobbers and interpretations given by C. N. Humphrey, Standard Oil Co. of Nebraska, and C. M. Sutherland, association secretary.

Mr. Humphrey told the jobbers that he had voted against price fixing at Chicago but that he now considers it necessary for a stable market in Nebraska.

On the question of commercial discounts there was only one dissenting vote when the group voted that these should be eliminated. An attempt was made to adopt resolutions putting all commission agents under the minimum wage and maximum hours clause of the code but only 50 votes were cast in favor of this.

Apparatus for Finding Load-Carrying Capacity of E. P. Lubricants

By S. A. Mc Kee[2], F. G. Bitner[2], and T. R. Mc Kee[2].

Presented before the International Auto-motive Engineering Congress, Chicago, Ill., Aug. 28, Sept. 4, 1933

AS a start on this work a study was undertaken of the performance of four of the test machines already developed for this purpose when operated with nine representative lubricants. The results of this investigation previously reported[3] consist of (1) data on load-carrying capacity for the nine lubricants when tested in each of all four machines, using the procedures recommended by the respective manufacturers, and (2) data showing the effect of speed and temperature upon the load-carrying capacity of a number of the lubricants when tested in two of the machines which were so modified that tests could be made over fairly wide ranges of speed and temperature.

The results of these preliminary tests indicated three points of significance; first, that the four machines, when operated as recommended by the manufacturers, did not rate the lubricants in the same order as regards load-carrying capacity; second, no set of operating conditions was found for each machine such that all the machines would rate all the lubricants in the same order; and third, no one machine rated the lubricants in the order of their service performances. Thus the design of the particular machine seemed to play an important part in determining the value obtained for the load-carrying capacity of a given lubricant under given operating conditions. This was indicated also by the fact that machines nearly alike in the design and action of the test pieces tended to be in closer agreement in the rating of the lubricants.

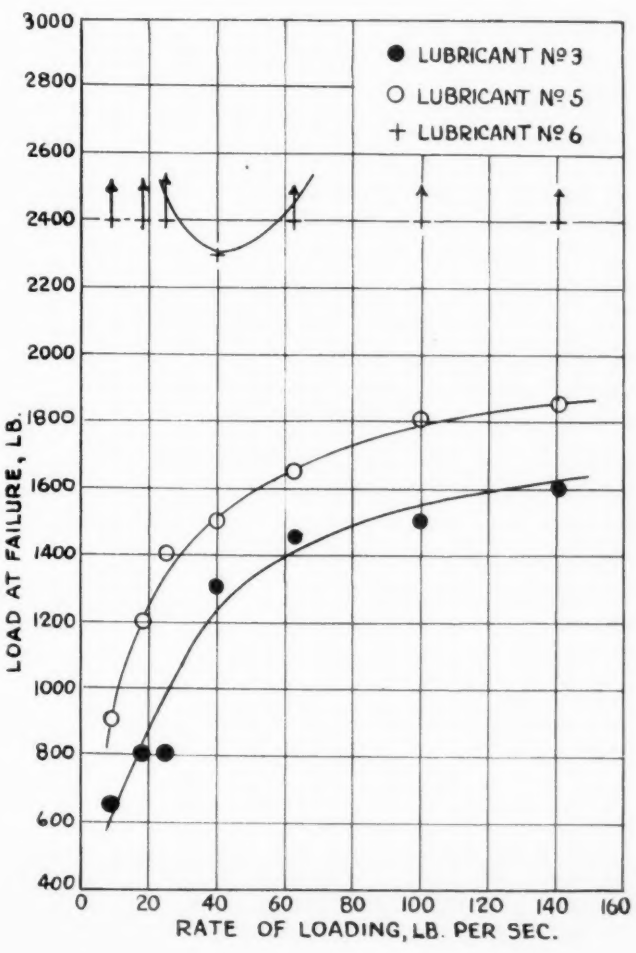


Fig. 1—(At Left) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 470 ft. per min., Oil Temperature 28°C

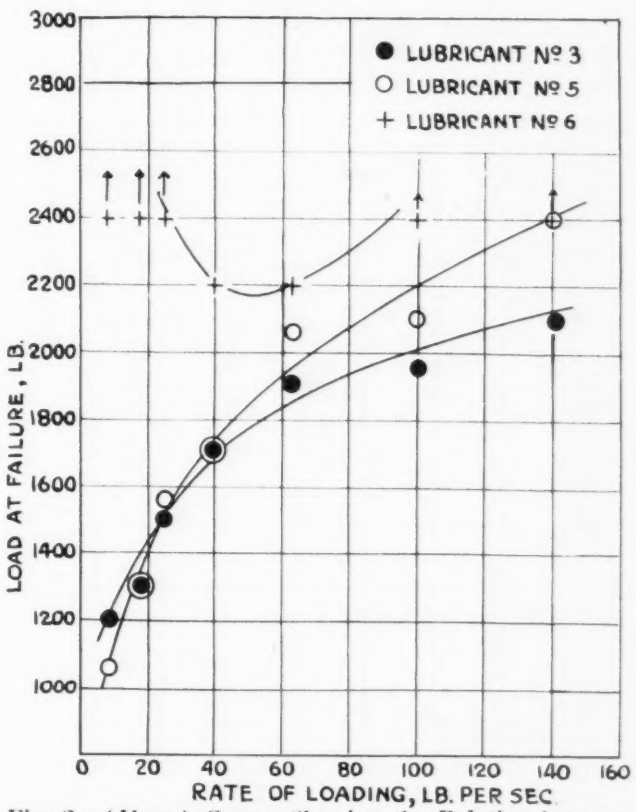


Fig. 2—(Above) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 470 ft. per min., Oil Temperature 100°C

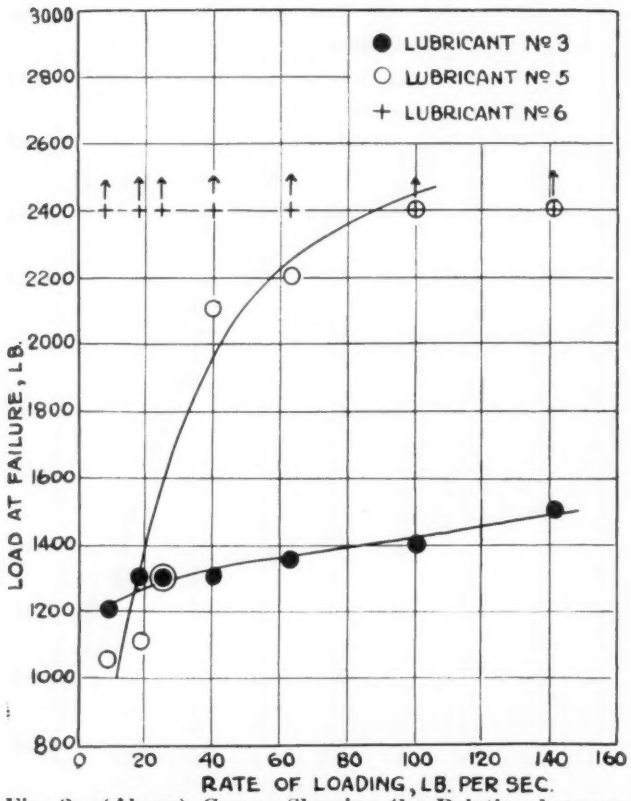


Fig. 3—(Above) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 470 ft. per min., Oil Temperature 175°C.

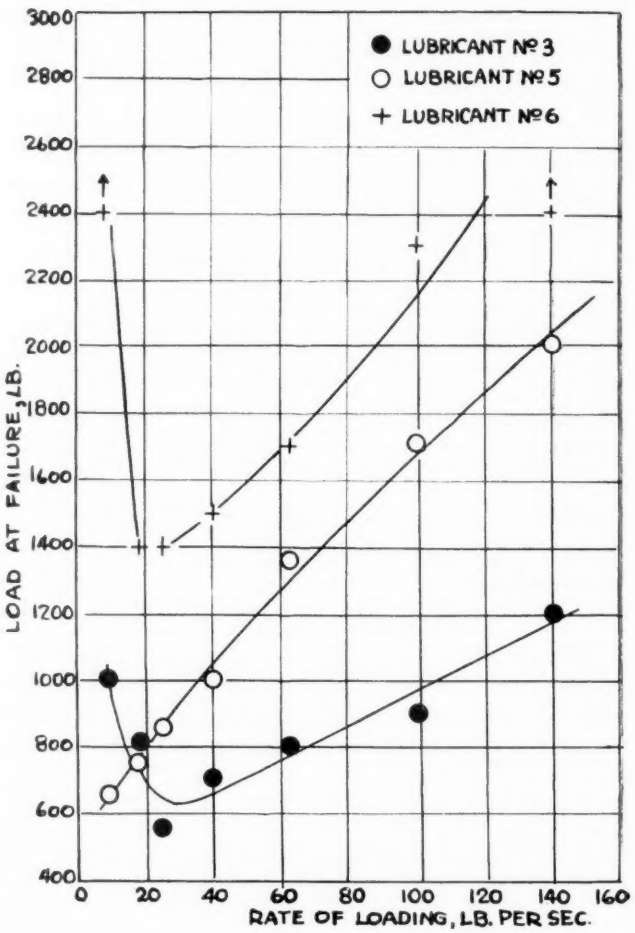


Fig. 4—(At Right) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 700 ft. per min., Oil Temperature 28°C.

In considering the design of these four machines it should be noted: first, that the shape and action of the test surfaces in all four differed markedly from the shape and action of the teeth in the usual type of gearing, and second, that the design of each was such that the ratio of applied load to actual pressure changed rapidly during a test run, thus casting serious doubt upon the comparability of the data.

Since the lubrication of gears is one of the major applications for extreme-pressure lubricants in the automotive field, it appeared desirable to attempt the development of an apparatus that would as far as possible stimulate the action of gears and also maintain a constant ratio between applied load and actual pressure throughout the test run. Accordingly a machine of this type was constructed and the load-carrying capacity of a number of lubricants was determined with it.

Apparatus

The testing mechanism consists essentially of two self-aligning steel rolls acting under load and so mounted that each may be independently driven at various speeds. These rolls are similar to the cups of typical tapered roller bearings. Their outer or working surfaces are ground to true cylinders and their bores or inner surfaces are ground on a taper.

The test machine contains two interconnected sets of gears mounted on anti-friction bearings in individual oil-tight cases providing bath lubrication. These cases are bolted to a bed plate, making the test machine proper a complete unit.

One of the gear boxes has a train of three gears with a fixed reduction of four to one. This box contains the main or high-speed shaft of the machine. One end of this shaft is connected to a variable-speed driving mechanism. The other end is provided with a taper that fits the bore of one of the test rolls and a nut for locking this roll securely in place.

The second gear box is provided with a connection for driving the second test roll. This box is so constructed that the gears are easily interchangeable, the gears being mounted on the ends of the shafts by means of S.A.E. standard tapers and locknuts. Gear ratios of 4 to 1, 3 to 2, 2 to 3 and 1 to 4 are available, the relative velocities of the two rolls being 1 to 1, 8 to 3, 6 to 1 and 16 to 1 with the respective ratios. When two gears are in mesh in this box the direction of rotation is such that the points of contact of the two test rolls are moving in the same direction, thus the action between the rolls is a combination of rolling and sliding with all relative velocities except 1 to 1 where the action is pure rolling. An auxiliary shaft is provided for inserting a third gear in the train to reverse the direction of rotation of the second roll and obtain pure sliding action.

The two test rolls are on parallel axes, the second roll being located directly beneath the one mounted on the main shaft. This lower roll is fastened by a taper and locknut to

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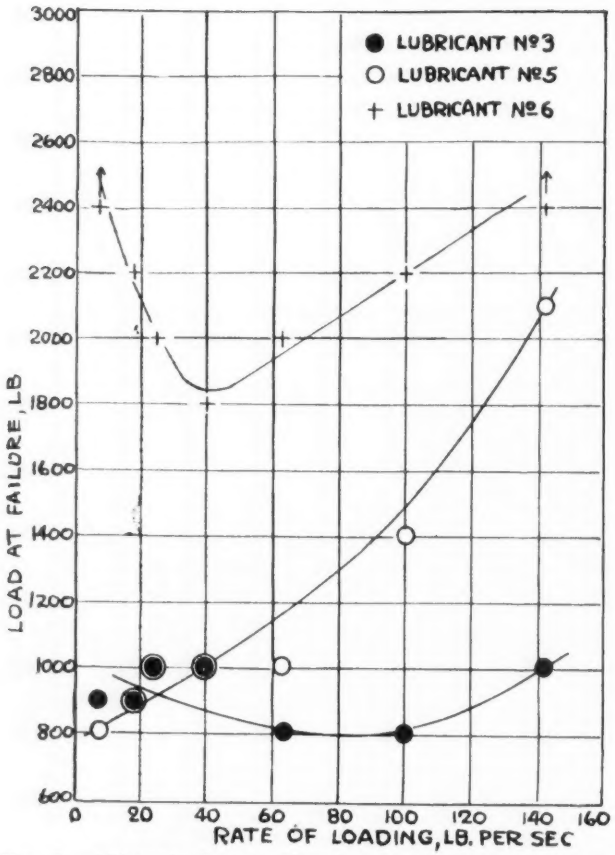

Fig. 5—(Above) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 700 ft. per min., Oil Temperature 100°C

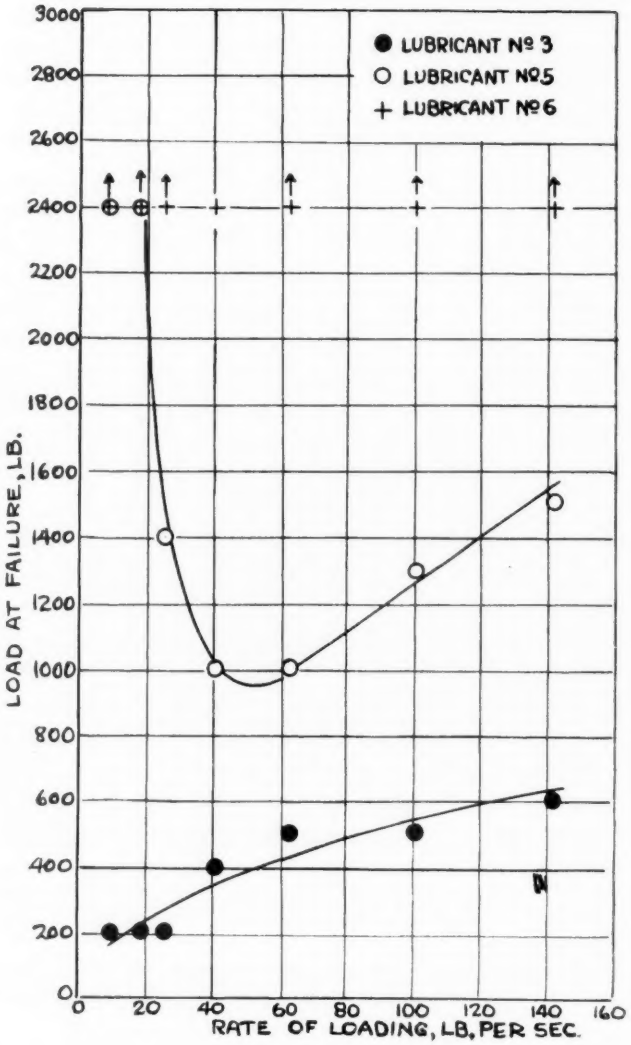

Fig. 6—(At Right) Curves Showing the Relation between the Load at Failure and the Rate of Loading for Various Lubricants, Rubbing Speed 700 ft. per min., Oil Temperature 175°C

a short shaft which is supported by two journal bearings mounted in a yoke. This yoke rests on a fixture provided with a lever for applying the load. The connection between yoke and fixture is in the form of a partial roller-bearing the axis of which passes through the center of the line of contact of the test rolls. This bearing provides for automatic axial alignment between the test rolls.

The complete unit consisting of roll, shaft, yoke and fixture is supported by a knife-edge and V-slot in a rectangular container holding about one quart of the lubricant. The knife-edge is so located that the mechanical advantage of the lever for applying the load is 10 to 1. An U-shaped stop on the base of the bath in contact with both ends of a threaded pin in the fixture holds the lower roll in longitudinal alignment with the upper roll. The threads on the pin provide for adjustment. Two spacers on the roll shaft placed between the ends of the lower roll and the ends of the journal bearings in the yoke make the longitudinal position of the lower roll independent of the fit of the roll on the taper and reduce the amount of adjustment necessary with the threaded pin.

The shaft for the lower roll is connected to the shaft in the gear box by a coupling of the Oldham type. This allows freedom for the lower roll to take up its position in proper alignment. The shaft in the gear box is fitted in a sleeve. The outer portion of this sleeve is threaded and a knurled nut engaging a pin passing through two slots in the sleeve and fitted to the shaft provides a means for moving the shaft axially so that the Oldham coupling may be disengaged when it is necessary to remove the unit from the oil bath in order to change rolls.

Load may be applied to the rolls either by the use of a scale pan and weights or by a hand lever provided with a thumb latch and quadrant. In the latter method a spring balance is introduced in the system to indicate the load applied. With the present apparatus the weight of the balance and the unbalanced portion of the lever arm exert a force equivalent to ten pounds at the end of the lever and the pointer of the balance is set to correct for this weight and indicate the actual load. A practically uniform rate of loading is obtained when desired by connecting a flexible steel cable from the hand lever to the tool carriage of a motor-driven lathe so located that the motion of the carriage is in line with the motion of the lever. A wide range of rate of loading is obtained by using the various feeds and speeds of the lathe.

The oil level in the container

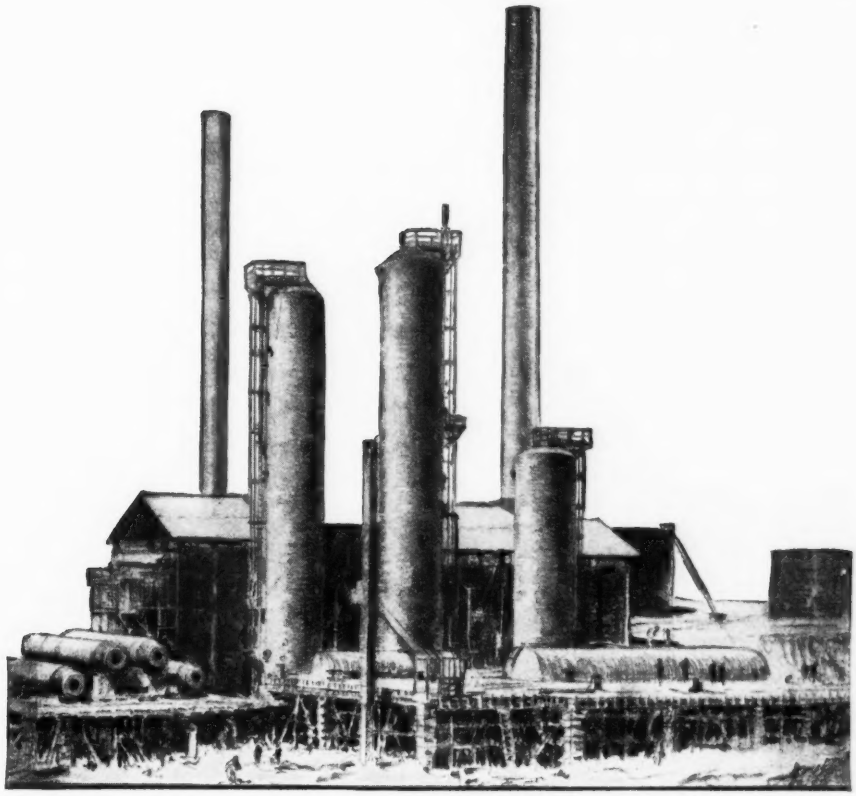

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Table 1—Experimental Data

Loads at Failure—Pounds

Lubricant No.	*Rubbing Speed ft./min.	Oil Temp. °C	Rate of Loading—Lbs. per Sec. 142	100	62.5	40	25	18.8	8.3
3	470	28	1600	1500	1450	1300	800	800	650
3	470	100	2100	1950	1900	1700	1500	1300	1200
3	470	175	1500	1400	1350	1300	1300	1300	1200
3	700	28	1200	900	800	700	550	800	1000
3	700	100	1000	800	800	1000	1000	900	900
3	700	175	600	500	500	400	200	200	200
5	470	28	1850	1800	1650	1500	1400	1200	900
5	470	100	2400	2100	2050	1700	1550	1300	1050
5	470	175	2400+	2400+	2200	2100	1300	1100	1050
5	700	28	2000	1700	1350	1000	850	750	650
5	700	100	2100	1400	1000	1000	1000	900	800
5	700	175	1500	1300	1000	1000	1400	2400+	2400+
6	470	28	2400+	2400+	2400+	2300	2400+	2400+	2400+
6	470	100	2400+	2400+	2200	2200	2400+	2400+	2400+
6	470	175	2400+	2400+	2400+	2400+	2400+	2400+	2400+
6	700	28	2400+	2300	1700	1500	1400	1400	2400+
6	700	100	2400	2200	2000	1800	2000	2200	2400+
6	700	175	2400+	2400+	2400+	2400+	2400+	2400+	2400+

Lubricant 9—Did not fail under any conditions of operation employed.

At a rubbing speed of 700 ft. per min. and oil temperature of 100°C lubricants 1, 2, 4 and 8 failed almost instantaneously with a load of 100 pounds on the rolls

*Ratio of Rolling to Rubbing Action = 1 to 15

is at the approximate center line of the lower test roll. The lubricant adheres to this roll and is carried up to the line of contact of the two rolls, the action being quite similar to that which occurs in the lubrication of many automotive gears. This bath also provides for the lubrication of the journal bearings in the yoke and the Oldham coupling. Two electric heaters, one in the base of the oil container and one of the immersion type in the oil itself provide means for heating the lubricant. The temperature of the lubricant is measured with a mercury-in-glass thermometer placed in the container. An approximate indication of the temperature of the upper roll is obtained by the use of a chromel-alumel thermocouple rubbing against the main shaft close to the roll. The fixture for the thermocouple also forms a guard over the upper roll to minimize splashing of the lubricant at high speeds.

The variable-speed driving mechanism used in the present work consists of an electric motor, two automotive transmissions, and an hydraulic variable speed transmission. It provides a continuous variation in speed from 0 to 1750 r.p.m.

The rolls used in the tests with this machine were made of a fine grain nickel molybdenum steel S.A.E. 4620, hardness about 65 Rockwell C. They were about 2 inches in diameter and ½ inch wide.

Eight of the nine lubricants originally chosen by the Sub-Committee were used in these tests. Since the object of the investigation was to develop a significant test machine and not to compare different types of lubricants, the composition of the individual lubricants is not pertinent. Tests were made, however, on mineral oil, castor oil and various combinations of mineral oil with lard oil, sulphur and chlorine preparations and lead soap.

Test Procedure

Most of the tests were made with the load applied at a uniform rate. At the start of a test run the driving mechanism was set to give the required speed, the feed and speed of the lathe were adjusted to give the desired rate of loading and the lubricant was heated to the desired temperature. The machine was then operated for a short time (about 30 seconds) until the speed had become constant. During this period the test rolls were operating under the load caused by the weight of the spring balance and lever arm. The lathe was then started and additional load applied at a constant rate until failure occurred or the maximum load capacity of the machine was reached. At the time of seizure, the spring balance and the emf of the thermocouple near the upper test roll were read, and the apparatus was stopped. The reading of the spring balance was taken to be proportional to the load-carrying capacity of the particular lubricant under the experimental conditions of speed, ratio of rubbing to rolling motion, rate of loading, and lubricant temperature.

Table 2—Examples of Reproducibility of Data

Loads at Failure—Pounds

Lubricant No. 3	Lubricant No. 5
1600	1500
1630	1400
1680	1520
1500	1400
1500	1390
Average 1580 ± 70	Average 1440 ± 50

With this apparatus the point at which failure occurs can be readily detected while the machine is running. A portion of the working surface of the upper roll is visible to the operator and at failure a definite score appears on this surface. Also, this scoring is usually accompanied by a fine spray of incandescent metal particles similar to that occurring when grinding steel with an abrasive wheel. The scoring occurred either over the entire width of the roll or in a band near the center, indicating that the partial roller bearing provided a suitable means for maintaining the proper line of contact between the rolls.

Test Results

The loads at failure obtained with this machine for the different lubricants under various conditions of operation are given in Table 1. The tests were made at several constant rates of loading of the rolls, the range being from 5 to 140 pounds per second. The rubbing speeds used were approximately 470 and 700 feet per minute and the initial oil temperatures were 28, 100 and 175°C. The ratio of rolling action to rubbing action was 1 to 15. Each test was run with a new sample of lubricant.

An indication of the reproducibility of the data with different specimens was obtained in tests with two of the lubricants. Five consecutive tests were made with each lubricant, holding the operating conditions as nearly alike as possible in each of the five tests; the data are given in Table 2. The mean load at failure obtained for one lubricant was 1580 pounds and the average deviation of the individual observations from the mean was ±70 pounds. With the other lubricant the mean value was 1440 pounds and the average deviation ± 50 pounds. In terms of the pressures involved, these deviations amount to from 2 to 3 per cent. If the lubricant is not stable, poorer reproducibility may be obtained.

Discussion of Results

The effect of the rate of loading upon the load at failure obtained with this machine is indicated graphically by the curves in Figs. 3, 4, 5, 6, 7 and 8. In these figures the loads at failure for lubricants 3, 5 and 6 are plotted against the rate of loading at lubricant temperatures of 28, 100 and 175° C and rubbing speeds of 470 and 700 feet per minute respectively.

From these figures it is seen that the rate of loading has a marked effect upon the values of the load at failure at given speeds and temperatures. At the higher rates of loading there is a general tendency for the values to decrease with a decrease in rate. At the lower rates, however, there is no general trend. Some of the curves pass through a minimum while others continue to decrease throughout the range covered. Also the effect of rate of loading differs with different lubricants. Excepting the tests at 175° C, where the values are above the loading capacity of the machine, all the curves for Lubricant 6 pass through a minimum. The values for Lubricant 5, on the other hand, pass through a minimum only under conditions of the highest temperature and speed employed.

Data were obtained for Lubricant 9, but it was found that, within the ranges of rate of loading, temperature, and rubbing speed covered, the load-

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carrying capacity of this lubricant was above the safe load for the machine. Tests made at one temperature, speed, and rate of loading with lubricants 1, 2, 4, and 8 indicated that the load-carrying capacities of these lubricants were too low to justify their study over the entire range at this time.

The effects of changes in rubbing speed and lubricant temperature upon the load-carrying capacity of the lubricants also are indicated by the curves in these figures. If the complete curves, rather than individual observations at given rates of loading, are considered it will be noted that in general the load-carrying capacities for all three lubricants tend to decrease with an increase in rubbing speed.

EFFECTS of changes in temperature, however, are different with different lubricants. The load-carrying capacity of Lubricant 6 tends to increase with increase in temperature. With Lubricants 3 and 5 no definite trend is indicated. The curve for Lubricant 3 is highest at the lower rubbing speed and middle temperature, and lowest at the highest speed and highest temperature. With Lubricant 5 an increase in temperature tends to increase the values at the lower rubbing speed but decreases them slightly at the higher speed.

In the rating of the lubricants from the standpoint of load-carrying capacity with this machine it is apparent that the overall performance of a given lubricant cannot be determined by a single test under any one set of operating conditions. If all the data are considered, Lubricant 9 definitely stands out as number one on the list, since the specimens did not fail under any condition of operation when this lubricant was used. The choice of the lubricant rating as second best is quite as definite, since the curves for Lubricant 6 fall well above those for lubricants 3 and 5. The overall performance of Lubricant 5 places it third on the list with Lubricant 3 as the fourth, although individual observations at the lower rates of loading at some speeds and temperatures are slightly higher with Lubricant 3. The values obtained for Lubricants 1, 2, 4 and 8 at a rate of loading of 40 pounds per second, a rubbing speed of 700 feet per minute, and a lubricant temperature of 100° C are so low as to indicate that these lubricants are unsatisfactory for use as extreme-pressure lubricants, at least under severe operating conditions.

In considering the above ratings it should be noted that wear on the rolls has little effect upon their contact area, thus the applied loads are reasonably accurate measures of the pressures on the rubbing surfaces. Computations of the pressures for various loads using the Hertz equation[4] for the elastic deformation and typical values for the physical properties of the steel (modulus of elasticity = 30,000,000, Poisson's Ration = 0.3) indicate that the average pressure on the rubbing surfaces may be as high as 180,000 pounds per square inch with a load of 2400 pounds and 115,000 pounds per square inch with a load of 1000 pounds.

These values are in error by an amount dependent upon the distribution of pressure by the film of lubricant. They are of interest, however in that these computed pressures are four or five times as great as values of the pressures at seizure obtained with other machines. One possible reason for this difference is that in this machine the constantly changing points of contact provide a better means for dissipation of heat. Another reason is that the action of the rolls may be more efficient in supplying lubricant to the rubbing surfaces.

ALL the data presented were obtained at one ratio of rolling to rubbing action of the test surfaces; effects of changes in this ratio are being investigated. Further, since the method of loading affects the friction and hence the rate of temperature rise, further tests on methods of loading may be desirable. Rise in temperature of the working surfaces appears to be doubly significant. In the first place, high temperature seems to assist the formation of a protective coating which increases the load-carrying capacity. In the second place, the rate of temperature rise may determine whether or not the coating will form in time to protect the surfaces. A combination of these effects appears to play an important part in determining the load-carrying capacity. In order to obtain data of direct application to service conditions, it may be necessary, therefore, to choose a somewhat different method of loading than was employed in the present case.

IT is of interest, however, that over the operating range covered the test results obtained with this machine appear to rate the lubricants in reasonable agreement with ratings based upon service performance in automotive hypoid gears, as evidenced by information obtained by a number of observers and made available to the Bureau. It is believed, therefore, that these results are sufficiently promising to justify cooperation work on the study of the load-carrying capacity of extreme pressure lubricants in machines of the same fundamental design, in order to obtain further information on the significance of the apparatus in terms of service performance.

In order to obtain information applicable to worm-gear lubrication, tests of a similar nature on steel-bronze combinations should be made.

List of References

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2—Bureau of Standards, Washington, D. C.

3—Load-Carrying Capacity of Extreme-Pressure lubricants, S. A. McKee, E. A. Harrington and T. R. McKee, Jour. S. A. E., Vol. 32, No. 6, June, 1933, pp. 217-223.

4—Hertz, H. Journ. Math. (Crelle) 92. 1881. ges Werke, Leipzig, 1:155. 1895.

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Constant Temperature-Steam Distillation

For Analysis of Heavy Fractions

ANALYTICAL distillation of lubricating oils and heavy petroleum fractions at constant temperature with varying steam ratio has proved to be a more suitable method for evaluating volatility of lubricants than any of the methods now in use. This conclusion was reached after extended research on the problem by two English chemists, R. N. J. Saal and C. G. Verver[1].

These investigators found that vacuum distillation methods, such as most tests of this type now are, have serious objections. The point at which the vacuum is determined usually shows little definite relationship to the actual pressure on the liquid surface. Many lubricants show fractions of molecular weight up to about 700, and require a vacuum of the order of 0.2 millimeters of mercury to distill the last portion over below 350 C., (662 F.), the highest liquid temperature which the authors believe should be used, to avoid decomposition or cracking.

By the use of a constant temperature bath of high heat conductivity, thus avoiding direct flame heating of the distillation flask, steam saturated with oil vapor, little if any dephlegmation, the authors have been able to eliminate these objections and develop a test which gives results which are reproducible and exact, they believe.

As a measure of relative volatility at constant distilling temperature, they have decided upon the ratio,

$$r = \frac{\text{volume of oil in distillate}}{\text{volume of condensed steam in distillate}},$$

or,

$$r :: \frac{pM}{18d\,(1-p)},$$

where M = molecular weight of oil in distillate;
p = vapor pressure in atmospheres of oil in still.
d = density of oil, with density of water as unity.

To show this result graphically, the authors plot the volume percentages of oil in the distillate, $\left(\frac{r}{r+1} \times 100\right)$, against the volume percentage of charge which has distilled over at the point the cuts were taken. By connecting the midpoints of this stepped curve, a fairly straight curve is obtained.

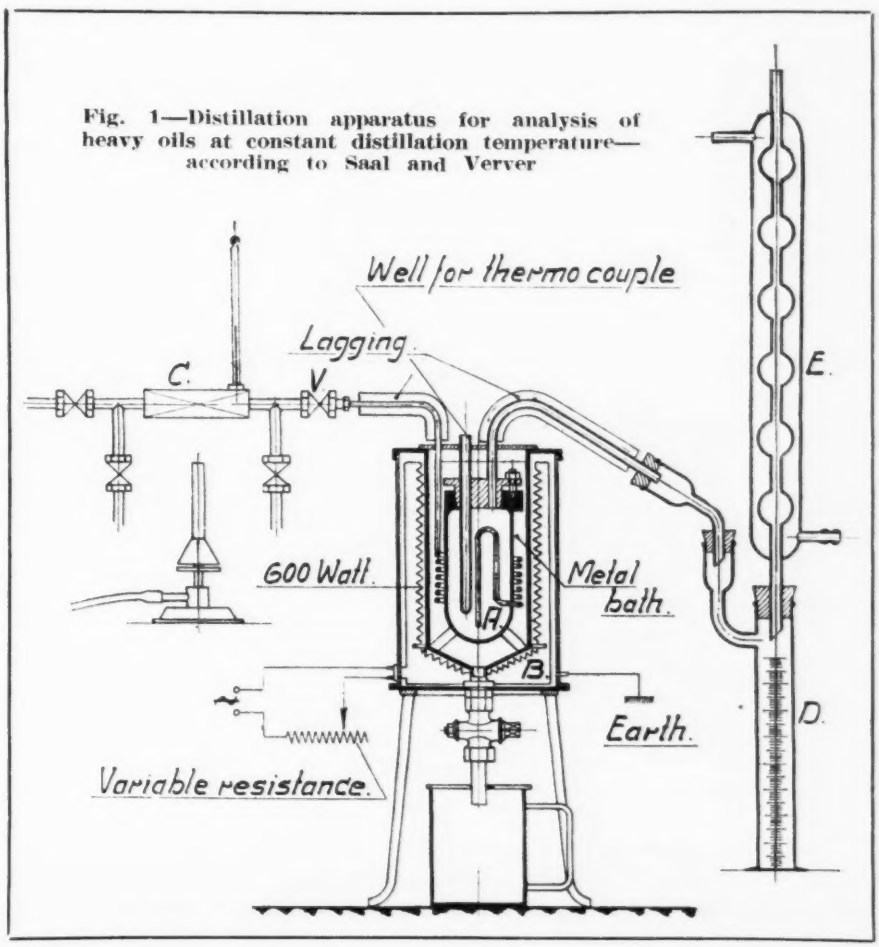
[1]Presented before Royal Academy of Arts, London, April 11, 1933.

Apparatus

The test still and accessories are shown in the accompanying Fig. 1. A is an iron still 8 cm. by 12 cm., fitted with a cover with a double cone joint. The cover is fitted with a vapor line, and a thermometer well.

The steam superheater C, raises the heat to slightly above the temperature required, and the steam then passes through a spiral coil of iron tubing of 4 millimeter i.d., immediately around the lower part of the still. The still is set in a lagged heating jacket filled with a low melting alloy, (Lichtenberg al-

Fig. 1—Distillation apparatus for analysis of heavy oils at constant distillation temperature—according to Saal and Verver



loy, m.p., 92 C.), employing 600 watts as heat source.

Steam to the still is regulated by a needle valve, V. The heating jacket is closed with a two-piece cover, and may be supported on a ring stand or similar support. The condenser E, is so placed to prevent or minimize the formation of stubborn emulsions, as would be the case if placed between still and receiver, D.

Although a construction which would keep the vapor line immersed in the bath metal to its highest point was employed in a large installation, this practice offered difficulties in the small unit, and the vapor line was lagged instead. Thermocouples were used to indicate the bath metal temperature and that of the still liquid.

Method of Test

After determining its specific gravity, the authors placed 100 grams of oil in the still, and added 75 grams of 4 mm. aluminum Raschig rings to promote easy distillation and release of vapors.

Distillation, carried out at the rate of 20-30 minutes for 100 cc. of total distillate, insures saturation of the steam with oil vapor. Fractions are cut at any convenient points, just so enough points are obtained to construct a suitable curve. Cuts should be small near the end of distillation, in order to determine more exactly the nature of the curve at that extremity, and because complete saturation is not obtained with less than three cc. of oil in the still.

If the oil and water layers do not separate closely or completely, placing the graduate in a hot water bath for a time will improve the separation. Often small drops of heavy oil will remain in the condenser, E, but will hardly affect the final result, the authors say. Retained water in the distillates may show more than 100 per cent recovery, but subtraction of the excess from the different fractions in the proper proportions will cause only slight error.

The authors used 320 C. and 350 C. (608 F., and 662 F.), for analysis of lubricating oils, and 300 C. (572 F.), for paraffin waxes. For lubricants the rate of distillation is about 2½ times as rapid at 350 C. as at 320 C.

The authors have found this method more accurate than those previously used for this purpose. Fig. 2 shows curves on a Pennsylvania bright stock and a heavy Pennsylvania cylinder oil as obtained by direct and by indirect heating in a metal pot.

The method appears to offer some advantage in determining the source of an oil, or of the components used in making up a blended oil. In one or two cases they were able to identify an oil as probably being composed of a low boiling component from one source and a high boiling component from an entirely different source[2].

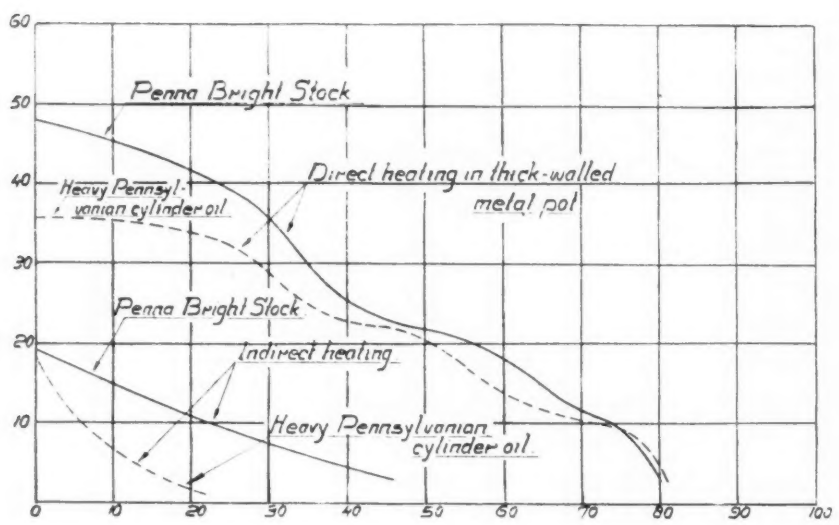


Fig. 2—Comparative distillation curves obtained when analyzing the same oils by direct and by indirect heating methods

[2]The authors in the original article included a considerable amount of discussion regarding the various applications of the method, and its accuracy and efficiency, which could not be included here.—Ed.

Monograph Describes Oil Exhibits at Chicago

CHICAGO, Aug. 31.—A 36-page illustrated monograph for limited distribution has just been issued by the committee in charge of the oil exhibit at the Century of Progress in Chicago. This booklet tells the complete story of oil as shown in the comprehensive exhibits set up in the Hall of Science, and is intended as a guide for those who are particularly interested in the display.

Illustrations in the booklet included dioramas of the more important exhibits such as "a typical oil field" showing both the surface and subsurface development; "a modern operating refinery" which reveals all processes through its glass towers and tubes and "the Turner Valley field" of Canada in scale reproduction. Accompanying text describes each exhibit.

The committee in charge of the oil exhibits consists of L. S. Wescoat, vice-president and Theron Wasson, chief geologist, The Pure Oil Co., Dr. R. E. Humphreys and Dr. Max Paulus, vice-presidents, Standard Oil Co., of Indiana; and E. C. Herthel, assistant vice-president, Sinclair Refining Co. W. B. Plummer, Standard Oil Co., Indiana and Dr. T. A. Link, Imperial Oil Ltd., directed the design of refining exhibits.

Power Prover Analyzes Exhaust Gases To Determine Motor Efficiency*

By L. T. White**

THE operator of a pleasure car or truck, with gasoline in the tank and the motor started, becomes a manufacturer of power; when he applies that power to the wheels, he produces miles of transportation. As a manufacturer of power he can be classed as relatively small and inexpert, for that function to him is both minor and secondary to his business and recreation.

Naturally, the scientific developments of a large power manufacturer for more efficient production of power through combustion when made available to these small gasoline engine power producers prove to be both interesting and valuable.

The automobile and its engine are produced by an industry which builds into the car all possible stamina, performance, and efficiency. Gasoline, likewise, is supplied to him from an industry anxious to give him a fuel into which all of the desirable qualities have been built.

The car is delivered to him, usually in perfect adjustment. He proceeds to drive it with the thought in mind that the less he does to it the better. Its power is far in excess of his every-day demands. He keeps few records of his mileage and costs. Hence a gradual diminishing of performance and efficiency go unnoticed. His motor produces its power through an involved process. Like any high speed precision piece of mechanism it needs, though seldom receives, frequent adjustments.

For example: Using a 6-cylinder engine, 4 to 1 gear ratio, 4 inches stroke, 90 inch wheel circumference, and 15 miles per gallon, in traveling 1000 miles his ignition system functions 8½ million times; his pistons travel 2100 miles; his valves operate 17 million times; the fuel system and carburetor have split 402 pounds of gasoline (67 gallons) into 8½ million fractions (explosions) through high speed atomization. Anyone will agree that devices which have functioned millions of times are entitled to study and probably will need readjustment.

My company is not primarily engaged in the manufacture and sale of automobiles. However, we do supply the motor fuels and lubricants to thousands of motorists. Gasoline, in this instance, is purchased as a means to an end. The finest of gasoline in a poorly adjusted motor must give poor results. Urged forward by the sincere desire to assist our customers to obtain better results from our products, it became clear to our organization years ago that the motorist needed assistance in keeping his motor in proper tune.

The first approach to this problem looked staggering in its difficulties. To prepare a mechanic so as to be intimately familiar with all motors and to know how to precisely adjust them and every ignition system, and the carburetor, was practically impossible. However, the task was undertaken and a comprehensive engine research activity begun eight years ago. In the process of studying conventional and in building advanced engines, an important discovery was made which, because of its simplicity, today causes wonder why it was not found years ago.

The gasoline engine mixes gasoline with air, burns the vapor, and from the resultant heat and expansion develops useful power. The heat units

*Presented as "Why Waste Fuel Through the Exhaust" at the International Automotive Engineering Congress of the Society of Automotive Engineers, Aug. 28-Sept. 4, Chicago.

**Cities Service Oil Co.

Testing, Adjusting Engine Efficiency Offered as Station Service

THE article published herewith is a description in detail of the so-called Power Prover developed by the Cities Service Oil Co. and introduced at their stations, about a year and half ago, for analyzing exhaust gas from an automobile engine, as a quick check-up on all motor parts and adjustments incidental to combustion.

The condition of the engine is checked visably, by means of this apparatus, for the benefit of the motorist, and the company engineers have devised a tuning routine which the station operators follow, to bring the motor back to greater efficiency.

The Cities Service company has found the Power Prover has considerable psychological value upon both the station operator and the motorist and is a successful means of enlarging the scope of the gasoline station's services to motorists.

supplied are either usefully consumed in the engine or are promptly and positively discharged in the exhaust system.

The failure of any of the motor's parts, incidental to combustion will decrease the number of heat units which are usefully used in the engine, and increase the number exhausted. Therefore, the exhaust gases become a perfectly reliable guide to the motor's efficiency of operation.

The problem then was to develop an instrument which, in the hands of an ordinary mechanic, would accurately analyze the potential fuel remaining in the exhaust gases. The development of this instrument required two years of special research.

Flue gas analysis is not a new subject. Its methods were early considered as a means of analyzing automotive gases. Conventional methods of analyzing flue gases, however, are based upon the determination of the quantities of certain combustible elements or compounds which may be found in exhaust gases, and from the determined quantities of these combustible elements or compounds, and the known heating value of these elements or compounds, an approximation of the potential fuel found in the exhaust might be made. For example: Gasoline, containing carbon and hydrogen, is combined with air, consisting of nitrogen and oxygen. After combustion, the products would be carbon dioxide, carbon monoxide, methane, hydrogen, and a great variety of miscellaneous hydro-carbons.

The determination of the presence and quantities of these various elements and compounds, chemically, would require a complicated process in the hands of an expert. Even then its determinations are only approximate; so this method was abandoned early in the considerations.

If it is desired to know the fuel or heating value of any substance, the very practical method of burning the substance and then carefully measuring the heat released should be used.

The Power Prover was designed to analyze automotive exhaust gases by actually burning them, and then accurately

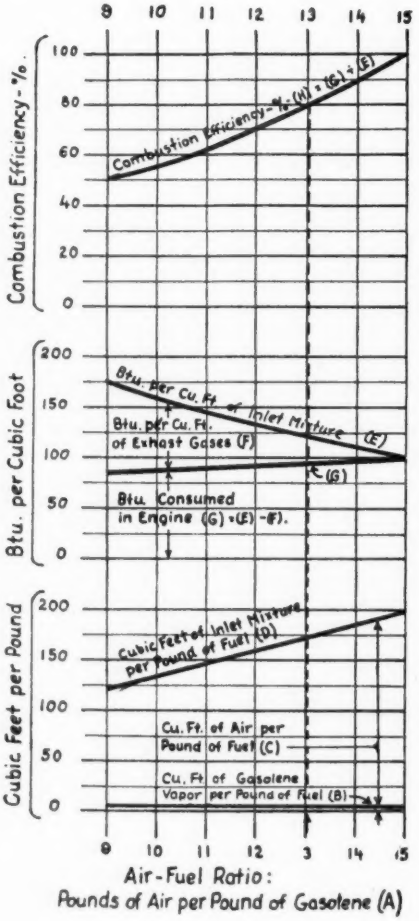

Combustion Efficiency - %
Btu. per Cubic Foot
Cubic Feet per Pound
Combustion Efficiency = % (H) = (G) ÷ (E)
Btu. per Cu. Ft. of Inlet Mixture (E)
Btu. per Cu. Ft. of Exhaust Gases (F)
(G)
Btu. Consumed in Engine (G) = (E) - (F).
Cubic Feet of Inlet Mixture per Pound of Fuel (D)
Cu. Ft. of Air per Pound of Fuel (C)
Cu. Ft. of Gasolene Vapor per Pound of Fuel (B)
Air-Fuel Ratio:
Pounds of Air per Pound of Gasolene (A)

Chart 1

recording the amount of potential fuel found in the exhaust and released in the instrument through burning the exhaust gases.

Considering internal combustion from the angle of heat supplied, used, and wasted, we have a much simpler thesis than is found in a chemical discussion. This discussion will necessarily be brief here because the paper is limited in length.

Gasoline containing 20,000 heat units per pound may be mixed with air in ratios of from 9 to 1, to 15 to 1. We find that in the 9 to 1 ratio the engine makes 122 cubic feet of gasoline-air vapor, and in the 15 to 1 ratio 200 cubic feet of vapor. As the heat units are supplied solely by the gasoline, the total heating value of the mixture remains the same, and with 9 to 1 ratios we must produce a richer vapor than in the case of the 15 to 1 ratio.

Each cubic foot of vapor in the 9 to 1 ratio would contain approximately 172 B.t.u.'s, while in the 15 to 1 ratio there would be approximately 100 heat units per cubic foot. Therefore, as the air fuel ratio is increased, the volume of vapor increases but the heat value per cubic foot of vapor decreases.

This is set forth numerically and graphically in the accompanying tables. By reference to the table, which is a simple example of the law of heat summation, it will be seen in each case that the heat units consumed in the engine and those found in the exhaust will equal the number of heat units originally supplied, and likewise show the soundness of the principle of determination of the number of B.t.u.'s present per cubic foot in the exhaust gases as a basis for reckoning combustion efficiency.

Combustion efficiency is the ratio of heat units consumed in the engine to those originally supplied.

An instrument which will analyze the potential heating value of exhaust gases, therefore, takes the form of a very accurate, continuous, automatic calorimeter. In the Power Prover, the method of determining the number of B.t.u.'s per cubic foot in the exhaust gases is briefly as follows:

A cross-section sample of the exhaust gases is drawn to the Power Prover by either mechanical or water suction, where these gases are liquidly cleaned and cooled to eliminate condensation and then dry filtered. The sample is then reduced to a standard quantity or volume. To this sample is added a standard quantity of air, sufficient to insure thorough combustion of the sample when ignited. The combined sample and air are thoroughly mixed prior to ignition.

To accomplish ignition of this very thin mixture, an unusual method was developed. The mixture is passed around a special platinum alloy wire, which has been previously and sufficiently heated electrically. As the sample-air mixture passes this heated wire combustion takes place through catalysis. There is no flame and the catalytic wire resumes its normal molecular structure readily.

The calculation of the amount of potential fuel found in the exhaust gas can be said to be

accomplished electrically.

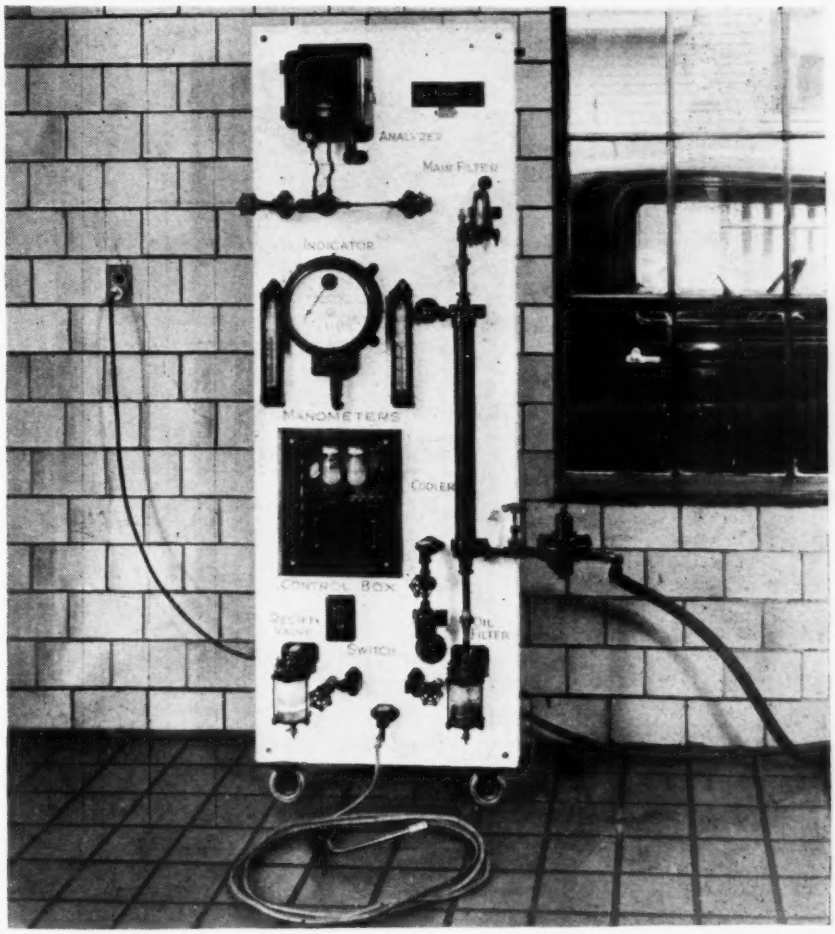
Electricity through resistance develops heat and, reversed, heat will increase electrical resistance. Therefore, the internal resistance of the catalytic wire will be increased in direct ratio to the heat released by the combustion set around the wire.

The active cell in the analyzer is balanced in a wheatstone bridge circuit, with an inactive cell around which the air alone passes, and which is subjected to an equal flow of pre-heating current. A sensitive galvanometer is mounted in parallel with the bridge circuit. As the sample flows around the heated wire, it will burn. The heat of combustion will impose resistance, which will cause the current supply to bridge, through the galvanometer, and to deflect the needle in direct proportion to the amount of fuel found in the sample and the heat resulting from the combustion of same.

The galvanometer dial has been designed to read automatically in combustion efficiency, through carefully calculated and proved determinations. So the operator of the Power Prover, having attached the sampling tip to the exhaust pipe, reads, within 30 seconds, the combustion efficiency with which the motor being tested is operated. He, therefore, has at a glance analyzed the efficiency of the prime function of an engine, its ability to use effectively the heat supplied. The automobile exhaust gas indications are much like the human pulse in that respect, where the doctor, after listening to a patient's statement that he believes he is ill, takes the pulse beats. If he finds that they are below or above normal, he too knows that something is wrong. However, in locating the cause of the trouble he is assisted, in human cases, because the patient can talk.

The patient can tell whether he has fever or chills and just where it hurts the most. The gasoline engine, however, is inarticulate; so the operator or mechanic, as he proceeds to correct the indicated fault, must first find the trouble by locating it.

When the Power Prover was perfected as an instrument it was realized, referring to the



Instrument board of the power tester as set up in Cities Service Oil Co., super service stations. Note its size which is large enough to attract attention and bring questions from motorists that usually result in increased business

doctor again, telling a patient he is ill has little practical value. Merely showing the motorist that his motor is inefficient was of no assistance. He and we wanted it improved. Therefore, a comprehensive field experiment of how best to use the Power Prover indications was undertaken. Investigations as to what was usually done to correct motor troubles found a most disorderly, unsystematic practice used by the average mechanic, who has only his eye and ear to guide him. The need for a systematic tuning routine was clear and so one was devised.

Each Power Prover operator proceeds systematically under a twenty-five point routine to adjust the motor, when his instrument has indicated the need for adjustment.

Next, with the Power Prover and the tuning routine, it was found that a skilled mechanic required special tools to accomplish precise adjustments. This opened a new field for research, which has been assiduously pursued. Power Prover service offered to the motoring public by this company may be said to now encompass use of our exhaust gas analyzer, a tuning routine, and a series of distinctive and specially designed tuning tools.

Perhaps the use of this service can best be made clear by outlining its application to a typical car.

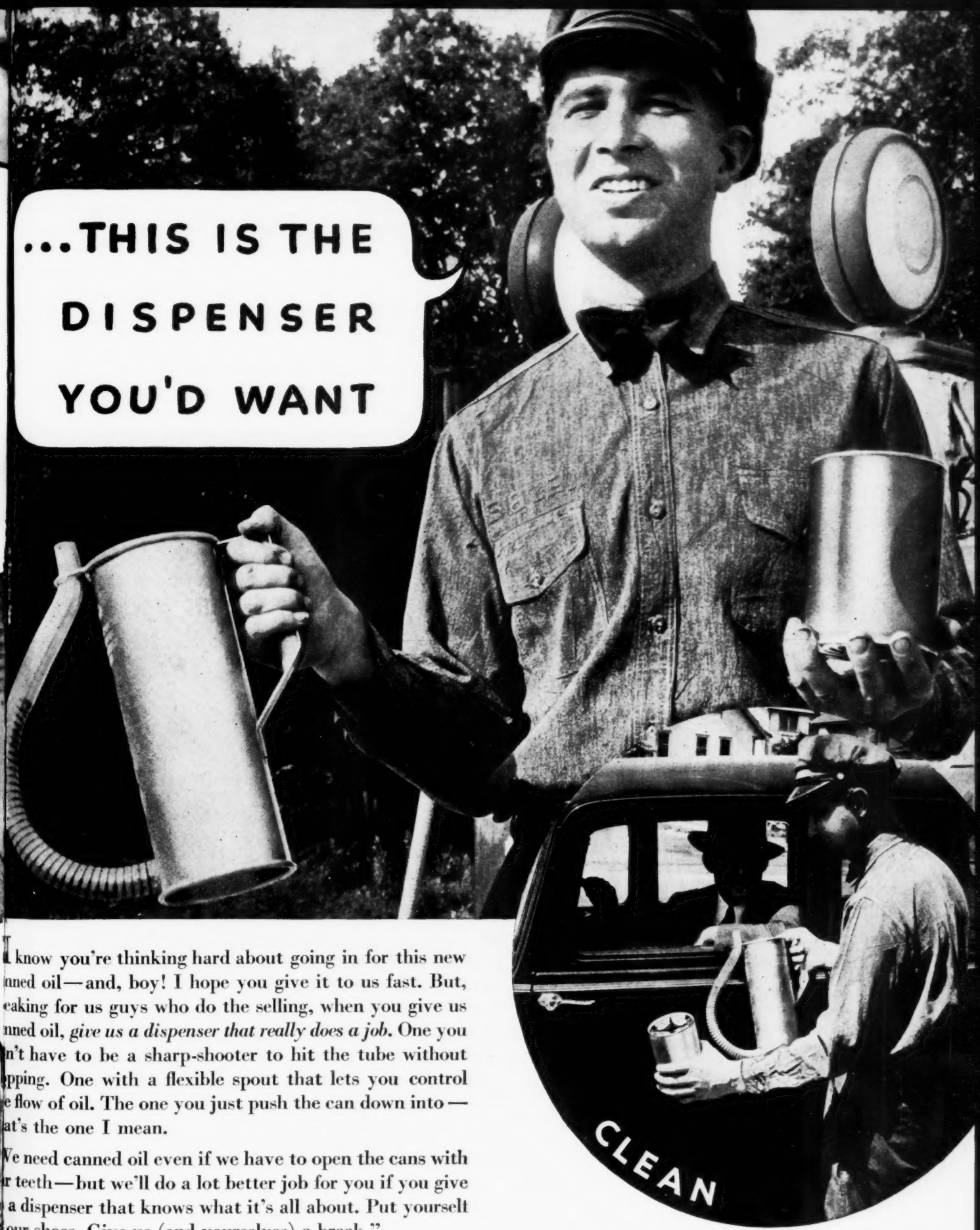
When the car is presented for test and tuneup, a careful record of the car and its motor is begun. This includes the owner's name and address, make, serial number, model year, and mileage of the car; the make and type of motor; ignition system; carburetor; and fuel system; the various specified adjustments for the motor and its parts are listed from carefully compiled data, and in the hands of each operator.

With the motor running, the sampling tip is attached to the

IF YOU RAN A SERVICE STATION..

When it comes to arresting the motorist's atten-'on and impressing him with refinery-sealed il, the service man can use the Canco Dispenser 'ith greater sales effect than any other made. 'he ingenious arrangement of knives—the single, wift shove of the can into the dispenser—the ntire mutilation of the end of the can—all spell ramatic merchandising and bigger sales.

The service man welcomes the Canco Dispenser—for one reason because it is most like the equipment he is used to handling. The flexible spout allows accurate dispensing—and control of the proper rate of flow. The oil goes from can to crank case in one swift simple operation.



I know you're thinking hard about going in for this new nned oil—and, boy! I hope you give it to us fast. But, eaking for us guys who do the selling, when you give us nned oil, *give us a dispenser that really does a job.* One you n't have to be a sharp-shooter to hit the tube without pping. One with a flexible spout that lets you control e flow of oil. The one you just push the can down into — at's the one I mean.

Ve need canned oil even if we have to open the cans with r teeth—but we'll do a lot better job for you if you give a dispenser that knows what it's all about. Put yourself our shoes. Give us (and yourselves) a break."

AMERICAN CAN COMPANY

30 Park Avenue, New York CANCO

icago: 104 So. Michigan Avenue **San Francisco: 111 Sutter St.**
rtland, Ore.: 26th & Wilson Sts. **Hamilton, Ont. · Emerald & Shaw Sts.**

Good station technique says "Be neat—be clean". Canco Dispensers obey that rule. Flexible spout gets into the tube without spill. And when the oil is dispensed there's no after drip to mess things up. Another thing: the can comes out as bright and clean as it went in—and that's important when the motorist is shown the empty can.

Table 1

Air-Fuel Ratio (lb. air per lb. fuel) A	Cu. Ft. per lb. Fuel: Gasolene Vapor B	Air C	Total Inlet Mixture D	Btu. in Fuel Supplied per Cu. ft. of Inlet Mixture E	Btu. per Cu. ft. of Exhaust F	Btu. Consumed in Engine G	Combustion Efficiency-Percent H	Classification of Mixture K
9 to 1	5	117	122	172	86	86	50	
10	5	130	135	158	69	89	56	Rich
11	5	143	148	144	51	93	64	
12	5	156	161	132	38	94	71	Range of
12½	5	163	168	126	31	95	75	Correct
13	5	169	174	121	23	98	81	Mixture
14	5	182	187	112	13	99	89	Lean
15	5	195	200	100	0	100	100	

exhaust pipe, and initial combustion efficiency readings taken at both idling and various running speeds.

The operator knows in advance that best performance and economy are obtained with combustion efficiencies of between 75% and 85%, depending upon the type and condition of the motor. Should the initial reading register above this, for example 90% to 95%, he would consider the possible causes as:

1. That the air-fuel ratio was providing too lean a mixture.
2. That the mixture was being diluted through air leaks in the intake manifold system, or around the stems of the intake valves.
3. That the valves were leaking. Defective intake valves allow spent gases to be driven into the intake system on exhaust strokes which impair fuel mixtures. Defective exhaust valves permit redrawing into the cylinder of spent gases on suction strokes.
4. Leaks in the exhaust pipe, through aspirator action of the exhaust gas stream, would dilute the exhaust sample.

When he encounters a reading below the proper range, for example between 50% and 60%, and these cases are by far the most common, he knows that the motor is not properly burning its fuel.

Guided by this knowledge, as to general faults, he proceeds with the tuning routine.

In all cases, condition of the lubricating oil in the crankcase is determined. When found to be too thin, replacement with fresh oil will improve combustion efficiency 5% to 15%, as it improves the piston seal and hence the compression.

The spark plugs are removed and tested under air pressure, corresponding to the maximum compression encountered in the engine. If acceptable, the plugs are cleaned, adjusted to specified gaps with feeler gauges, and are ready to be restored to the engine.

Next a test is made of the ability of each cylinder to hold compression. This is accomplished by a gauge inserted in the spark plug hole through which compressed air is admitted. The gauge consists of two dials, one indicating the pressure admitted to the cylinder, and the second indicating the pressure within the cylinder. If the pressure within the cylinder is less than that admitted, the operator can rate each cylinder as to its degree of leakage: Zero, indicating no leakage; and 1 to 10, the various degrees of leakage.

This method, conducted while the motor is silent, very frequently locates the point of leakage; as the admitted air leaking through the intake valve may be heard in the manifold or carburetor, leaking through exhaust valve can be heard in the exhaust manifold, or if leaking by the rings, it can be heard at the breather pipe. If valve leakage is indicated, sufficient valve clearances are insured. Then if valve regrinding is necessary, the motorist is urged to have his valves overhauled through his dealer or regular repairman.

If, on the initial readings, the motor was shown to have abnormally high readings at high engine speeds, the cause frequently is due to "valve bounce" at high speeds, and is the result of weak or fatigue valve springs. After such indications, the tension of each valve spring is readily noted by a device which compresses the spring, similar to the forked tool used in removing valve keys. The pressure of the spring is indicated by the gauge between the handles of this tool.

In the case of weak or defective springs, the motorist is referred to his dealer or repairman.

Next, the motor is carefully timed. Timing on the vast majority of cars encountered is found to be defective. On one series of 1800 cars checked as to timing, only 20 were found to be correct. In our procedure, timing is adjusted from exact piston positions, with its natural advantages over haphazard methods.

Incidental to timing and synchronizing the motor, the circuit breaker and distributor mechanism are carefully examined, and worn and defective parts are replaced. The plugs are restored then and the motor warmed to normal running temperature.

The next step is to verify the engine's timing at various speeds and here again it is found that exact timing adjustments made while the motor was stationary very frequently did not hold true, especially under high speed conditions; this because, in some cases, of lag through wear of the mechanical mechanism, and, second, through failure of the spark governor, or automatic spark advance to function, or to function evenly, as speeds were increased.

Speed timing is checked with

(*Continued on page* 65)

ADVERTISING PAGES REMOVED

Refinery --- Tank Wagon Markets

Oil Prices Advance Over Broad Front; All Markets Point Higher

CLEVELAND, Sept. 5

PRICES advanced over a broad front in oil markets last week as "code time" drew near. Higher prices were announced in all branches of the industry although crude price increases fell behind retail and tank car markets in volume of activity.

As the last week in August ended, prices continued to point higher. As this is being written there comes an advance in Mid-Continent crude of 10 cents per barrel. Standard of Ohio announces a 1-cent advance in gasoline prices throughout Ohio. Apparently the advancing markets are only beginning to get under way.

The California retail market remained in bad shape the most of last week but started to tighten as the effective date for the oil code drew near. Influence of the code was beginning to be felt and the price war in its recent form appeared to be over.

Crude oil markets were featured by a 15-cent advance in Pennsylvania grades. These oils are now priced 95 to 98 cents a barrel higher than they were on May 9 of this year when depression lows were reached.

There were few parts of the country where higher retail prices were not put in force. Nearly every Standard company in the country, outside of the California and Kentucky companies, revised their retail prices upward. And a notable feature of the upward revisions was the holding down of tank wagon prices so that dealers, through wider margins, would benefit from the move.

In tank car markets, all commodities from gasoline to wax advanced in price. Gasoline, although rather firmly held by sellers in all areas, was not as buoyant as the heavier oils. In nearly all districts there was talk of a shortage of the burning oils—of the heavy grades as well as the lighter grades.

Trading was held back to a great extent because of the inability of buyers to obtain their requirements. Most of them were covered on their immediate needs but, feeling that prices were definitely pointed higher, most buyers wanted to protect themselves for at least several weeks in advance.

Actual trading was perhaps the liveliest in the cargo market at the Gulf and in the export division of the market particularly. Several part cargoes of 64-66, 375 end point gasoline, the most common export grade, were sold and at rising prices. The heavy oil market at the Gulf remained tight, and due to their inability to obtain Bunker C, many buyers who usually obtain their requirements at the Gulf went to the Pacific coast for supplies.

Chicago Market Marks Time Pending Code Action

Staff Special

CHICAGO, Sept. 2

THE Chicago market passed through a week of watchful waiting. Traders were curious and in some cases apprehensive regarding future operations under the oil code which became effective Sept. 2.

The chief object of discussion appeared to concern the base price for gasoline which the new code gives the President the authority to set. Reports were current throughout the week that the base price for gasoline, in tank cars, would be 5 cents a gallon and that crude oil would be set at $1.00 a barrel. Another strong rumor was that retail prices would take a proportionate advance soon. Insofar as was known these were merely speculation on the part of the trade and had no definite foundation.

Some traders paid considerable attention to the rumors and reports and held off trading until such a time as things were more definite. Others said they were not so sure that the President would set a gasoline price immediately, even though he might set one for crude oil. They based their opinion on the fact that the market had shown considerable strength and rising tendencies the past month and thought that if crude oil prices only were set, that tank car gasoline prices would attain proportionately higher levels.

Summary of Group 3 Quotations for U. S. Motor Gasoline

In Effect Sept. 5, 1933

	59 Octane and Below	60-64 Octane No.	65 Octane and Above
Okla.	4.00-4.25	4.50-4.75	5.00-5.25
Kans.	4.00-4.125	4.50-4.625	4.875-5.00
N. Tex.	4.00-4.25	4.50-4.75	4.875-5.00
W. Tex.	4.00-4.25	4.50-4.75	4.875-5.00
E. Tex.	3.875-4.00	4.375-4.50	4.75-5.00
La.-Ark.	3.875-4.00	4.375-4.50	4.75-5.00

Prices are those quoted on the basis of f.o.b. Group 3 by refiners in the districts designated.

Tank car gasoline prices showed little actual change during the week. Quotations for U. S. Motor, 59 octane and below, were mostly at 3.625 cents and up over the week, although on Sept. 2 the minimum generally appeared to be at 3.75 cents. Scattered sales were reported at under the above prices, particularly for gasoline which carlot marketers had purchased early in August for shipment throughout the month, and on which they wanted shipping instructions by Sept. 1.

On the other hand, refiners were not particularly anxious to sell much gasoline and in many cases were merely taking care of their regular contract customers. Those refiners who would sell in the open market said their prices were for immediate shipment only and in many cases they requested the shipping instructions with the order.

The buying side of the picture showed a steady movement of gasoline, although generally in small quantities. Some jobbers reported they had already filled

their storage and were sitting back and waiting for things to happen. Others said they had put some gasoline in storage but had not filled up completely. They were in the market mostly for their current requirements.

Other commodities in the Chicago market generally followed the same upward price trend as gasoline. However, as it is not expected that any price fixing will be done on these products they were working upward more from a general tightness in the market than from the thought that they would be higher after the code goes into effect.

Furnace, gas and fuel oils, suitable for home burner use, continued to be on the market in restricted quantities. Traders generally reported a gradual advance in prices for these oils.

The wax market remained in good shape, according to reports from refiners. They said demand continued to hold up well and that storage still was being drawn on. Prices were steady to higher.

Mid-Continent Refinery Markets

Prices Rise For All Commodities

Staff Special

TULSA, Sept. 2

ADVANCING prices for all major commodities featured the Mid-Continent refinery market the last week of August.

Announcement of the personnel of the Planning and Co-ordination Committee and the approach of the week end and Labor Day holiday caused considerable activity in the gasoline market, as far as efforts to buy were concerned, but resulted in little actual trading due to the fact most refiners remained out of the market.

This situation caused quotations and offers to buy to move upward as the time for the code to become effective drew near.

The fact that a majority of the Planning and Co-ordination Committee were known to be in favor of price fixing was the cue the jobbers had been waiting for since the code was signed by President Roosevelt.

Inquiries began coming in rapidly after the personnel of the committee was revealed. Jobbers believed generally there would be some price fixing provisions with reference to gasoline, and they wanted to buy at prevailing price levels and get as much gasoline storage as possible in order to have as large a "profit" as possible.

Refiners were equally anxious to have "profits" and they were not interested in the offers at current levels. Most of them preferred to await further action by the committee, feeling, as did the jobbers, that higher prices were not far away. In the meantime, they ran their production from present priced crude to storage.

Chicago Tank Car Market

Following prices are in cents per gallon, except fuel oil in barrels, in tank car lots, representing majority of sales to jobbers on Group 3 freight basis, although shipments may originate in other refining districts, such as North, West and East Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc. Prices do not include state or federal taxes levied on some products.

	Prices Sept. 5	Prices Aug. 28	Prices Aug. 21
50-52, 437 e.p. naphtha	3.50 – 3.625	3.375	3.00 – 3.125
U. S. Motor Gasoline, *by octane numbers:			
59 and below	3.75 – 3.875	3.625– 3.75	3.25 – 3.50
60-64	4.25 – 4.375	4.125– 4.375	3.875– 4.375
65 and above	4.625– 4.875	4.50 – 4.875	4.50 – 4.875
60-62, 400 e.p. gasoline	3.75 – 3.875	3.625– 3.75	3.25 – 3.50
64-66, 375 e.p. gasoline	4.00	3.875– 4.00	3.50 – 3.75
68-70, 350-360 e.p. gasoline	4.125	4.00	3.75 – 3.875
Aviation Gasoline, below 73 octane number	5.125– 5.25	5.125– 5.25	4.875– 5.125
41-43 water white kerosine	2.625	2.50 – 2.625	2.375– 2.50
42-44 water white kerosine	2.75	2.625– 2.75	2.50 – 2.75
38-40 prime white Furnace Oil	2.25 – 2.375	2.25 – 2.375	2.125
38-40 straw Furnace Oil	2.125– 2.25	2.125– 2.25	2.00 – 2.125
32-36 dark gas oil	1.625	1.50 – 1.625	1.25 – 1.375
32-36 dark zero gas oil	2.00 – 2.125	2.00 – 2.125	1.875
32-36 straw zero gas oil	2.125– 2.25	2.125	1.875– 2.00
28-30 zero fuel oil (per bbl.)	$0.725–$0.775	$0.725–$0.75	$0.70 –$0.725
28-30 fuel oil (per bbl.)	$0.60 –$0.625	$0.60	$0.55 –$0.60
24-26 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.425	$0.35 –$0.40
18-22 fuel oil (per bbl.)	$0.30 –$0.35	$0.275–$0.30	$0.25 –$0.30
18-22 zero fuel oil (per bbl.)	$0.45 –$0.50	$0.425–$0.475	$0.425–$0.45
14-16 fuel oil (per bbl.)	$0.30	$0.25 –$0.275	$0.25

*Octane numbers are determined by C.F.R. motor method (ASTM D 357-33T).

Naphtha and Solvent

(Prices are in cents per gallon, in tank car lots, as quoted by Chicago sellers)

	Sept. 5		Aug. 28	
	F.O.B. Group 3 Basis	F.O.B. Chicago District	F.O.B. Group 3 Basis	F.O.B. Chicago District
Stoddard Solvent	5.00 – 5.375	7.00 – 9.00	5.00 – 5.375	7.00 – 9.00
V. M. & P. Naphtha	5.50 – 5.75	7.50	5.50	7.50
Cleaners Naphtha	5.75 – 6.00	9.00	5.75 – 6.00	9.00
Oleum Spirits	4.50 – 4.75	6.00	4.50 – 4.75	6.00
Rubber Solvent	5.50 – 5.75	10.00	5.25 – 5.75	10.00
Lacquer Diluent	7.00 – 7.25	9.50	7.00 – 7.25	9.50

Contract customers were anxious to get gasoline but refiners in most instances attempted to limit their shipments to these accounts as much as possible.

Gasoline prices before the end of the week were largely nominal, with inquiries heavy and actual selling virtually at a standstill.

A considerable amount of gasoline was known to be on terminal tracks awaiting an advance in prices before it is pushed into the market. This gasoline was causing considerable concern among refiners in the Mid-Continent who saw in it a possible cutting off of business for them for several days after the price fixing provisions are made known.

Natural gasoline moved upward in price along with refined gasoline. Demand was heavy most of the week and some coastwise and export business was reported. Orders were placed in all districts and stocks at the beginning of the month were reported low in most fields. Refiners were heavy buyers of the stabilized grades indicating they were preparing for more volatility as the fall months approached. Grade 26-70 was well entrenched Sept. 2 at 3.5 cents a gallon.

Kerosine reversed its trend before the end of the week and prices turned upward again. Material was reported scarcer in all districts and inquiries were more numerous. Buyers apparently were of the opinion kerosine would move upward along with gasoline after the code became effective.

Furnace oil became a scarce item in the Mid-Continent. Most of the trade had looked to East Texas lately for furnace oil in the open market, but several refiners have curtailed or shut down completely since crude prices went up and "hot oil" was harder to obtain with the result stocks were lower. Refiners having contracts were not interested in the open market and were storing the furnace oil not required to fill contracts in anticipation of higher prices when the furnace oil season gets under way.

Gas oil was almost unobtainable in the open market, particularly the zero, straw colored oil. The ordinary gas oil was sought actively for cracking purposes.

Fuel oil buying was heavy most refiners said. Industrial users continued to order heavily in the hope of filling storage before the code went into effect with possibility of higher prices. Railroads also took some fuel for storage and in some instances refiners bought for cracking stock. Prices continued to show an upward trend.

Wax prices advanced slightly with demand steady and stocks still low. Bright stock and neutral oils were steady.

California Refinery Market

Retail Markets Remain Unsettled

LOS ANGELES, Sept. 1

DISTURBED conditions in the southern California retail market due to the price war that started two weeks ago became even more acute during the past week. However, although the code does not become effective until Sept. 2, its influence is already felt and the war appears to be over in its present form.

Retail gasoline prices in the Los Angeles Basin reached a new low in midweek, when a number of independently owned stations were selling third-grade brands at 9.9 cents. Some major companies met the cut by selling their competitive brands at 12.5 cents, but others maintained prices at 14.9 cents. In general, prices or regular major brands remained at 18.5 cents and Ethyl at 20.5 cents.

An independent marketing outlet for one of the major companies is understood to have established a tank wagon price of 12.5 cents in the Fresno area of the San Joaquin Valley. This is approximately 1.5 cents under the price previously in effect.

One independent refinery reported that it had lost business because it would not meet a quotation of 9.5 cents for tank-truck-and-trailer delivery. Deducting federal and state taxes and allowing 0.25-cent for delivery charges, that price would have netted the refinery 4.75 cents. Tank-truck-and-trailer prices of independent refiners have ranged from about 9.75 to 10.75 cents, including taxes.

Because the code becomes effective on a Saturday, when the offices of all major companies are closed and, in this instance, will remain closed for a three-day holiday, over Labor Day, the immediate effect of the code on retail prices will not be seen until next week. Its probable effect, however, is indicated by the fact that some independent refiners have already advanced tank-truck-and-trailer prices to 12 cents and small dumps to 12.25 cents. Independent refiners in general take the attitude that under the code they will not be allowed to sell below cost, whereas during the past few weeks receipts have not actually covered costs.

No changes were reported in spot sales in out-of-state gasoline traffic. Few inquiries were received.

Seasonal demands for heavier burning oils in the dehydrating industry, as well as anticipation of fall and winter needs of industrial and domestic heating are being made but, so far, have not changed spot quotations, which remain within the range of from 4 to 4.5 cents.

Fuel oil, 14-16 gravity, ranged from $0.45 to $0.55 per barrel, with some reports of $0.40. Gas and diesel oils, 30-34 and 27 plus, respectively, were still available at from $0.85 to $0.95 in tank car lots.

Trade with the Orient, particularly with China, was reported active in preparation for the approaching winter demand. According to one supplier from 45,000 to 55,000 barrels of kerosine-distillate had been booked for shipment from Aug. 15 to Sept. 15. He admitted that he had lost one order because he could not meet the price of $12.65 a ton, c.i.f. on a 37 gravity product, which would have netted back approximately $0.95 a barrel at the refinery. Orders, he said had been filled at prices ranging from $13.50 to $14 for 36-38 gravity, and from $14 to $15 for 38-40 gravity.

General prices on Pacific coast export remain unchanged from previous quotations.

Case goods demand from the Orient and Australia for kerosine and gasoline continued fair to good without any material change in prices.

Prices A Year Ago

Sept. 6, 1932

	Oklahoma	Penna.
58-62 U. S. Motor (57-65 Octane No. in Okla.)	4.75-5.25	6.50-6.625
Grade 26-70, Natural Gasoline	2.25	.....
Kerosine (Okla. 41-43; Pa. 47 w.w)	3.00-3.25	4.75-5.00
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.425–$0.45	3.25–3.50
Crude (Okla. 35-35.9)	$0.90	$1.97
Chicago tank wagon (including 3c state, 1c federal tax)		17.10c

Made Wisconsin Official

MADISON, Wis.—A. Fiore, of the Fiore Coal & Oil Co., has been appointed vice president of district No. 1 for the Wisconsin Petroleum Association, Milwaukee.

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted. Tank car prices do not include state or federal taxes levied on some products.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Sept. 5	Prices Aug. 28	Prices Aug. 21
OKLAHOMA (F. o. b. Oklahoma refineries)			
50-52, 450 e.p. naphtha...	3.625 – 3.875	3.375– 3.625	3.25 – 3.50
U. S. Motor Gasoline			
59 octane and below...	4.00 – 4.25	3.625– 3.75	3.50 – 3.625
60-64 octane number...	4.50 – 4.75	4.125– 4.50	4.00 – 4.50
65 octane and above...	5.00 – 5.25	4.50 – 5.00	4.50 – 5.00
60-62, 400 E.P. Gasoline..	4.00 – 4.25	†3.625– 3.875	3.50 – 3.75
64-66, 375 E.P. Gasoline..	4.125 – 4.25	3.875– 4.00	3.625– 3.875
68-70 350-360 e.p. gasoline	4.25 – 4.375	4.00 – 4.125	3.875– 4.00
Aviation Gasoline:			
Below 73 Octane number	5.25	5.00 – 5.25	4.875– 5.125
WESTERN PENNSYLVANIA			
52-54 Naphtha.....	5.25 – 5.50	5.125– 5.25	5.00 – 5.25
54-56 Naphtha.....	5.50 – 5.75	5.25 – 5.50	5.00 – 5.25
U. S. Motor gasoline (58°-62°).....	5.50 – 5.75	5.25 – 5.50	5.00 – 5.50
Motor Gasoline			
Minimum 60 octane...	6.125– 6.25	6.00 – 6.25	6.00 – 6.25
Minimum 65 octane...	6.50 – 6.625	6.375– 6.625	6.375– 6.50
Minimum 70 octane...	6.875– 7.00	6.75 – 7.00	6.75 – 7.00
64-66 390 e.p. gasoline...	6.00 – 6.25	5.75 – 6.00	6.00 – 6.25
68-70 350-360 e.p.....	6.25 – 6.50	6.00 – 6.25	6.25 – 6.50
OHIO (Quotations of S. O. Ohio. Delivered any point in Ohio.)			
U. S. Motor Gasoline....	7.50	6.75	6.75
Above 65 Octane number	7.75	7.00	7.00
KANSAS (F. o. b. refinery, Kansas destination)			
U. S. Motor Gasoline			
59 octane and below...	4.125– 4.25	3.75 – 4.00	3.50 – 3.75
60-64 octane number..	4.625– 4.75	4.375– 4.50	4.25 – 4.50
65 octane and above...	5.125– 5.25	4.75 – 4.875	4.75 – 4.875
60-62 400 e.p. gasoline...	4.125– 4.25	3.875– 4.00	3.50 – 3.75
NORTH TEXAS‡ (F. o. b. Wichita Falls district refineries for unrestricted shipment)			
U. S. Motor Gasoline			
59 octane and below...	4.00 – 4.25	3.625– 3.75	3.50 – 3.75
60-64 octane number..	4.50 – 4.75	4.125– 4.25	4.125– 4.375
65 octane and above...	4.875– 5.00	4.50 – 4.75	4.50 – 4.875
60-62 400 e.p. gasoline...	4.00 – 4.25	3.75 – 4.00	3.625– 3.875
64-66 375 e.p. gasoline...	4.125– 4.25	3.875– 4.00	3.625– 3.75
68-70 350-360 e.p. gasoline	4.25 – 4.375	4.00 – 4.125	3.875– 4.00
WEST TEXAS‡ (F. o. b. West Texas refinery for unrestricted shipment)			
U. S. Motor Gasoline			
59 octane and below...	4.00 – 4.25	3.625– 3.75	3.50 – 3.75
60-64 octane number..	4.50 – 4.75	4.25 – 4.375	4.125– 4.375
65 octane and above...	4.875– 5.00	4.50 – 4.75	4.50 – 4.875
EAST TEXAS‡ (F. o. b. East Texas refineries for unrestricted shipment)			
U. S. Motor Gasoline			
59 octane and below...	3.875– 4.00	3.625– 3.75	3.50 – 3.625
60-64 octane number..	4.375– 4.50	4.125– 4.25	4.00 – 4.375
65 octane and above...	4.75 – 5.00	4.50 – 4.75	4.50 – 4.75
NORTH LOUISIANA (For Louisiana and Arkansas destination)			
U. S. Motor Gasoline			
59 octane and below...	4.25	4.00	3.50
60-64 octane number..	4.75	4.75	4.50
65 octane and above...	5.25	5.25	5.00
ARKANSAS (For Arkansas and Louisiana destination)			
U. S. Motor Gasoline			
59 octane and below...	4.25	4.00	3.50
60-64 octane number..	4.75	4.75	4.50
65 octane and above...	5.25	5.25	5.00

Note: Octane numbers shown above in Oklahoma, Kansas, Texas, Louisiana and Arkansas, are determined by C. F. R. motor method. (A. S. T. M. D 357 — 33 T).

‡Refiners generally receive 0.25c to 0.5c per gallon more for gasoline and kerosine for local or differential territory shipment.

†Prices Nominal. ††Only one refiner Quoting •Quotations only.

	Prices Sept. 5	Prices Aug. 28	Prices Aug. 21
CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)			
54-58 U.S. Motor, 437 e.p.	5.00 – 6.50	5.00 – 6.50	6.25 – 9.25
54-58 U.S. Motor, 437 e.p. for outside state shipment	5.00 – 6.00	5.00 – 6.00	6.00 – 7.75
58-61, 375-400 e.p. gasoline, 65 octane and above	7.00 – 9.00	7.00 – 9.00	.....
42-45 Engine Distillate 445-480 e.p.....	6.00 – 7.50	6.00 – 7.50	6.00 – 7.50

NATURAL GASOLINE

OKLAHOMA (F. o. b. Group 3)			
Grade 26-70.....	3.50	3.25	‡3.00
NORTH TEXAS (F. o. b. Breckenridge)			
Grade 26-70.....	3.50	3.25	‡3.00

‡Correction: Aug. 21, price was 3.00c, instead of 3.125c.

CALIFORNIA (F. o. b. plants in the Los Angeles basin).			
75-85, 375-390 e.p. for blending.....	5.25 – 6.25	5.25 – 6.25	5.25 – 6.25

BURNING OILS

WESTERN PENNSYLVANIA			
45 w.w. kerosine.....	4.125– 4.25	4.00 – 4.25	4.00 – 4.25
46 w.w. kerosine.....	4.375– 4.50	4.25 – 4.375	4.25 – 4.375
47 w.w. kerosine.....	4.50 – 4.625	4.375– 4.50	4.375– 4.50
OKLAHOMA (F. o. b. Oklahoma refineries)			
41-43 w.w. kerosine.....	2.625– 2.75	2.50 – 2.625	2.375– 2.50
42-44 w.w. kerosine.....	2.75 – 2.875	2.625– 2.75	2.50 – 2.625
KANSAS (F. o. b. refinery Kansas destination)			
41-43 w.w. kerosine.....	2.75 – 2.875	2.625– 2.875	2.625– 2.875
42-44 w.w. kerosine.....	2.875– 3.00	2.875– 3.00	2.875– 3.00
NORTH TEXAS‡ (F. o. b. Wichita Falls district refineries for unrestricted shipment)			
41-43 w.w. kerosine.....	2.75 – 2.875	2.625	2.50
NORTH LOUISIANA‡ (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine.....	3.25	3.25	3.00 – 3.25
ARKANSAS‡ (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine.....	3.25	3.25	3.25
CALIFORNIA (F. o. b. California refineries)			
38-40 w.w. kerosine.....	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50

NEUTRAL OIL

WESTERN PENNSYLVANIA Viscous Neutrals (Viscosity at 70° F.)			
Vis.			
200 (180 at 100) No. 3 color 420-425 flash:			
Zero pour test.....	21.50 –21.75	21.25 –21.50	21.25 –21.50
10 pour test.....	20.50 –20.75	20.25 –20.50	20.25 –20.50
15 pour test.....	19.50 –19.75	19.25 –19.50	19.25 –19.50
25 pour test.....	19.25 –19.50	19.00 –19.25	19.00 –19.25
180 No. 3 color, 410-415 flash:			
25 pour test.....	16.75 –17.00	16.50 –16.75	16.50 –16.75
150 No. 3 color, 400-405 flash:			
Zero pour test.....	17.00 –17.25	17.00 –17.25	17.00 –17.25
10 pour test.....	16.50 –16.75	16.50 –16.75	16.50 –16.75
15 pour test.....	15.00 –15.25	15.00 –15.25	15.00 –15.25
25 pour test.....	14.25 –14.50	14.25 –14.50	14.25 –14.50

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted. Tank car prices do not include state or federal taxes levied on some products.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

Prices Sept. 5

****MID-CONTINENT** (F. o. b. Mid-Continent Refineries)

Vis.	Color	0 to 10 Pour Point	15 to 30 Pour Point
100	No. 2	4.50 – 5.50	4.00 – 5.00
150	No. 3	6.50 – 7.50	6.00 – 7.00
150	No. 4	6.25 – 7.25	5.75 – 6.75
180	No. 3	7.75 – 8.75	7.25 – 8.25
180	No. 4	7.50 – 8.50	7.00 – 8.00
180	No. 5	7.25 – 8.25	6.75 – 7.75
200	No. 3	8.25 – 9.25	7.50 – 8.50
200	No. 4	8.00 – 9.00	7.25 – 8.25
200	No. 5	7.75 – 8.75	7.00 – 8.00
220	No. 3	9.25 –10.25	8.75 – 9.75
220	No. 4	9.00 –10.00	8.50 – 9.50
220	No. 5	8.75 – 9.75	8.25 – 9.25
240	No. 3	10.25 –11.25	9.50 –10.50
240	No. 4	10.00 –11.00	9.25 –10.25
240	No. 5	9.75 –10.75	9.00 –10.00
280	No. 3	11.25 –12.25	10.50 –11.50
280	No. 4	10.75 –11.75	10.25 –11.25
280	No. 5	10.50 –11.50	10.00 –11.00

SOUTH TEXAS (F. o. b. South Texas refineries)

Vis.	Color	Prices Sept. 5 (Viscosity at 100° F., pour test 0)	Prices Aug. 28	Prices Aug. 21
200	No. 3 Pale	6.00 – 6.50	6.00 – 6.50	5.50 – 6.00
300	No. 3 Pale	6.50 – 7.00	6.50 – 7.00	6.00 – 6.50
500	No. 3½ Pale	7.50 – 8.00	7.50 – 8.00	7.00 – 7.50
750	No. 4 Pale	8.00 – 8.50	8.00 – 8.50	8.00
1200	No. 4 Pale	8.50 – 9.00	8.50 – 9.00	9.00
200	No. 5½ Red Oil	5.50 – 6.00	5.50 – 6.00	5.00 – 5.50
300	No. 5½ Red Oil	6.00 – 6.50	6.00 – 6.50	5.50 – 6.00
500	No. 6 Red Oil	7.00 – 7.50	7.00 – 7.50	6.50 – 7.00
750	No. 6 Red Oil	7.50 – 8.00	7.50 – 8.00	7.50
1200	No. 5-6 Red Oil	8.00 – 8.50	8.00 – 8.50	8.50

Note: Red oil prices shown above cover oils with blue cast; one or two refiners ask 0.5c to 1c per gallon higher for green cast red oils.

CALIFORNIA (F. o. b. California refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 3	10.00	10.00	10.00
150	No. 3	10.00	10.00	10.00
200	No. 3	10.00	10.00	10.00
300	No. 3	11.50	11.50	11.50
450	No. 3	12.00	12.00	12.00
500	No. 3	12.00	12.00	12.00
550	No. 3	12.50	12.50	12.50
600	No. 3	12.50	12.50	12.50
100	No. 5	10.00	10.00	10.00
200	No. 5	10.00	10.00	10.00
300	No. 5	11.50	11.50	11.50
400	No. 5	12.00	12.00	12.00
500	No. 5	12.00	12.00	12.00
600	No. 5	12.50	12.50	12.50
700	No. 7	12.50	12.50	12.50
800	No. 7	13.00	13.00	13.00

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)
(Prices represent quotations and Sales)

190-200 Vis. D at 210° Bright Stock	24.50	24.50	24.50
150-160 Vis. D at 210° Bright Stock:			
0-10 cold test	21.75	21.75	21.75
10-25 cold test	21.25	21.25	21.25
25-40 cold test	20.75	20.75	20.75
150-160 Vis. E 210° Bright Stock	20.75	20.75	20.75
600 St. Ref. Olive Green	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
600 St. Ref. Dark Green	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50
*631 Steam Refined	11.00	11.00	10.50
Black Oil	2.625– 2.875	2.625– 2.875	2.625– 2.75

*Changed from 630 to 631 Aug. 28.

WESTERN PENNSYLVANIA (A. S. T. M. Tests)

600 Steam Refined	15.00 –15.25	14.75 –15.00	14.75 –15.00
650 Steam Refined	17.25 –17.50	17.00 –17.25	17.00 –17.25
600 Flash	18.25 –18.50	18.00 –18.25	18.00 –18.25
630 Flash	23.25 –23.50	23.00 –23.25	23.00 –23.25
600 Warren E	18.75 19.00	18.50 –18.75	18.50 –18.75
Bright Stock, No. 8 color, 140-150 vis. at 210°, 540-550 flash:			
10 pour test	27.50 –28.00	27.00 –27.50	27.00 –27.50
15 pour test	26.00 –26.50	25.50 –26.00	25.50 –26.00
25 pour test	25.00 –25.50	25.00 –25.50	25.00 –25.50

†Prices Nominal.

WAX

	Prices Sept. 5	Prices Aug. 28	Prices Aug. 21
WESTERN PENNSYLVANIA (Per pound, F. o. b. New York)			
122-124 white crude scale a.m.p.	3.35 – 3.375	3.35 – 3.375	3.25 – 3.375
124-126 white crude scale a.m.p.	3.40 – 3.50	3.40 – 3.50	3.375– 3.50
****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)			
124-126 White Crude Scale, a.m.p.	3.25	3.125– 3.25	3.00
CHICAGO (F. o. b. Chicago district refineries, in cents per pound, in bags, carload lots. Melting points are A.S.T.M method; add 3° F. to convert into A.M.P.)			
122-124 fully refined	3.90 – 4.00	3.90 – 4.00	3.90 – 4.00
125-127 fully refined	4.15 – 4.25	4.15 – 4.25	4.15 – 4.25
127-129 fully refined	4.30 – 4.40	4.30 – 4.40	4.30 – 4.40
130-132 fully refined	4.90 – 5.00	4.90 – 5.00	4.90 – 5.00
132-134 fully refined	5.15 – 5.25	5.15 – 5.25	5.15 – 5.25
135-137 fully refined	5.90 – 6.00	5.90 – 6.00	5.90 – 6.00

GAS AND FUEL OIL

WESTERN PENNSYLVANIA (For outside Pittsburgh district)			
36-40 fuel oil	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
OKLAHOMA (F. o. b. Oklahoma refineries)			
38-40 Straw Furnace Oil	2.375– 2.50	2.25 – 2.375	2.125– 2.25
32-36 straw gas oil	1.625– 1.75	1.625– 1.75	1.50 – 1.625
32-36 straw gas oil zero	2.375	2.125– 2.25	2.125– 2.25
32-36 dark gas oil	1.625– 1.75	1.625	1.50
32-36 dark gas oil zero	2.375	2.125– 2.25	2.00 – 2.125
28-30 fuel oil,zero(perbbl.)	$0.80 –$0.85	$0.775–$0.825	$0.70 –$0.75
28-30 fuel oil (per bbl.)	$0.70 –$0.725	$0.70	$0.55 –$0.575
24-26 fuel oil (per bbl.)	$0.475–$0.525	$0.475–$0.525	$0.45 –$0.50
22-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.425–$0.475
18-22 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.40 –$0.475
16-20 fuel oil (per bbl.)	$0.425	$0.40 –$0.425	$0.35 –$0.375
14-16 fuel oil (per bbl.)	†$0.40 –$0.425	†$0.40	†$0.35
KANSAS (F. o. b. refinery Kansas destination)			
38-40 straw Furnace Oil	2.50	2.50	2.50 – 2.625
18-22 fuel oil (per bbl.)	$0.50 –$0.525	$0.50 –$0.55	$0.45 –$0.50
10-14 fuel oil (per bbl.)	$0.45 –$0.475	$0.475–$0.50	$0.425–$0.475

‡Correction: This price effective Aug. 14.

NORTH TEXAS (F. o. b. Wichita Falls district refineries for unrestricted shipment)			
38-40 straw Furnace Oil	2.50	2.25 – 2.375	2.125– 2.25
38-40 prime white Furnace Oil	2.625	2.375– 2.50	2.25 – 2.375
32-36 gas oil, zero	2.375	2.125– 2.25	2.125– 2.25
32-36 gas oil	1.75	1.75	1.375
24-26 fuel oil (per bbl.)	$0.475–$0.50	$0.475–$0.50	$0.425–$0.475
18-22 fuel oil (per bbl.)	$0.425–$0.45	$0.425–$0.45	$0.375–$0 425
WEST TEXAS (F. o. b. West Texas refineries for unrestricted shipment)			
32-36 gas oil, zero	2.25 – 2.375	2.125	1.875– 2.00
18-22 fuel oil (per bbl.)	$0.50	$0.50	$0.475–$0.50
NORTH LOUISIANA (For Louisiana and Arkansas destination)			
32-36 gas oil	1.75 – 1.875	1.75 – 1.875	1.75 – 1.875
32-36 gas oil, zero	2.25 – 2.375	2.25	2.25
20-24 fuel oil	$0.60	$0.60	$0.60
16-20 fuel oil	$0.55	$0.55	$0.55
10-14 fuel oil	$0.45	$0.45	$0.45
ARKANSAS (For Arkansas and Louisiana destination)			
32-36 gas oil	1.75 – 1.875	1.75 – 1.875	1.75 – 1.875
32-36 gas oil, zero	2.50	2.25	‡2.25
28-30 gas oil, zero	2.00	2.00	2.00
20-24 fuel oil (per bbl.)	$0.60	$0.60	$0.60
16-20 fuel oil	$0.55	$0.55	$0.55
10-14 fuel oil	$0.45	$0.45	$0.45

‡Correction: Aug. 21 price was 2.25c, instead of 2.50c.

CALIFORNIA (F. o. b. refinery)			
14-18 fuel oil (per bbl.)	$0.45 –$0.55	$0.45 –$0.55	$0.45 –$0.55
14-18 Bunker oil (per bbl.)	$0.55 –$0.65	$0.55 –$0.65	$0.55 –$0.65
30-34 gas oil (per bbl.)	$0.85 –$0.95	$0.85 –$0.95	$0.85 –$0.95
27 Plus Diesel oil (per bbl.)	$0.85 –$0.95	$0.85 –$0.95	$0.85 –$0.95

PETROLATUMS

WESTERN PENNSYLVANIA (Per pound, in barrels, carload lots, f.o.b. Penna. refinery. In tank cars 0.5c to 0.625c (beginning Aug. 21, 1933) per pound less.) Quotations are from majority of refiners.

Snow White	6.875– 7.00	6.875– 7.00	6.875– 7.00
Lily White	5.625– 5.75	5.625– 5.75	5.625– 5.75
Cream White	4.625– 4.75	4.625– 4.75	4.625– 4.75
Light Amber	2.625– 2.75	2.625– 2.75	2.625– 2.75
Amber	2.375– 2.50	2.375– 2.50	2.375– 2.50
Red	2.125– 2.25	2.125– 2.25	2.125– 2.25

****Prices represent quotations and sales.**

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Eastern Domestic Markets

T. C. Prices Up As Retail Markets Improve

Staff Special
NEW YORK, Sept. 2

ADJUSTMENTS in retail markets, persistent talk of higher prices, and hesitancy on the part of traders to make commitments until after the oil code becomes effective combined to hold eastern tank car markets in a highly confused state the last week in August.

Jobbing demand generally was spotty. Not until late in the week, when several Standard companies made adjustments in their retail market structures, advancing prices to the public in some instances, did activity pick up noticeably in tank car trading.

Fully appreciative of the fact that there were still many problems for every oil man to face in the immediate future, the tense feeling which has pervaded the New York oil trade since President Roosevelt signed the oil code relaxed somewhat following announcement of appointments to the Planning and Co-ordination Committee. Consensus of opinion among the New York trade appeared to be that the President had selected men who would do their utmost to guide the industry back to prosperity as judiciously and fairly as possible. Concern over the price fixing sections of the code and speculation as to what revisions the Planning and Co-ordination Committee would recommend dominated trade gossip. Oil men in New York, however, seemed to be "resting easier," feeling the chances were excellent that only constructive developments would be forthcoming from Washington from now on.

Elimination of cash discounts on gasoline at service stations by Standards of New Jersey and New York and Atlantic Refining Co. late in the week was generally expected among the trade. The New York company advanced cash prices 1 cent and the New Jersey company raised its cash prices 0.5-cent, however, and in view of last week's upward revisions, still higher retail prices had not been anticipated quite so soon.

Sellers in most eastern districts advanced their tank car prices for gasoline 0.25 to 0.5-cent following announcement of the retail price advances. With end-of-August commitments out of the way, markets in nearly all districts appeared to be in much better position. High octane gasoline still was available at 6 cents a gallon in the Baltimore district but elsewhere along the seaboard it was quoted by the majority of sellers at 6.25 cents minimum with some asking 6.5 cents. Spot trading was moderately active and suppliers reported orders received against contracts were unusually heavy.

Large buyers were more interested in covering on their requirements for the next few months than the smaller buyers appeared to be. And in the cargo market an even greater reluctance to make commitments was noted on the part of suppliers. Domestic cargo prices were entirely nominal. Below 65 octane gasoline at the Gulf was quoted at 4.75 to 5 cents with higher octane material priced at 5.25 to 5.375 cents, but it was doubtful if actual business could be done on the basis of these prices. Sellers expressed them only as their ideas of the market.

Export gasoline prices at the Gulf were definitely higher. The more commonly exported grade—64-66, 375 end point gasoline—sold at rising prices. One part cargo sold at 4.625 cents and another at 4.75 cents. Late in the week a French buyer was in the market with a firm offer of 4.875 cents for a small cargo. The lower gravity gasolines advanced in sympathy with the 64-66, although they are now almost out of the picture as an important market factor.

The market for bunker oil was even more of a nominal affair than the market for gasoline. Cargo prices worked up closer to the posted market of $0.80 per barrel for bunkers and buyers were unable to obtain offerings. Considerable bunker oil business which normally would have been placed at the Gulf has gone to the Pacific coast recently due to the inability of buyers to obtain their requirements at the Gulf.

Wax Markets

Prices Generally Steady

NEW YORK, Sept. 2.—While trading slowed down slightly in wax markets the past week, prices generally were steady and in some quarters higher prices were indicated. Crude scale was closely held in the New York market. Proximity of prices for the lower melting point fully refined grades to prices for crude scale was the only factor that was preventing a further advance in scale prices, in the opinion of several important market observers.

Little change was reported in the status of the New Orleans market with prices there following the New York market closely.

Pennsylvania Markets

Prices Higher Following Crude Advance

CLEVELAND, Sept. 2.—Most refined products were quoted higher in the western Pennsylvania market following the 15-cent advance in crude prices posted by major buyers Aug. 30. Demand, particularly for light oils, picked up considerably.

The advance in crude prices took many of the Pennsylvania trade by surprise. While higher prices generally had been anticipated for the industry, Pennsylvania crude already had enjoyed such a wide advance over the low prices reached earlier this year that a further advance in prices had not been looked for at least until after the code becomes effective. At current levels, Pennsylvania grade crudes are up 95 to 98 cents from the depression lows reached May 9 of this year.

The market for refined oils was somewhat unsettled immediately following the boost in crude prices. Trading of lubricating oils had picked up considerably, particularly along inter-refinery lines. While this had eliminated a good bit of the surplus that was hanging over the market, lubricating oils still were not in good position. Prices of the more closely held oils were advanced 0.25 to 0.5-cent late in the week. Bright stock, 25 pour test, however, still was offered rather freely at 25 cents in some parts of the field and the 150 neutrals also were unchanged in price.

Demand for kerosine was much more active, according to most reports. Prices were up 0.125-cent late in the week and tending higher as the market closed Saturday.

Fuel oil and wax were steady to higher.

Oil Inspection Digest Revised

CLEVELAND—The digest of state oil inspection laws, compiled by the Western Petroleum Refiners Association biennially, has been brought up to date and published as of July 15. This year's digest is printed, rather than mimeographed as previously, into a hand-sized volume with stiff covers.

The book contains a brief resume of inspection laws on petroleum products for every state having inspection. States are arranged alphabetically.

Included also are U. S. Specifications for various petroleum products, for quick comparison with the various state laws. Inspection fees are given, where those are in effect.

NEW YORK, Sept. 2—J. H. Dunbar, formerly manager of sales in the New England territory for Hartol Products Corp. has been made general sales manager of the company as of Sept. 1 and is now located in the New York office.

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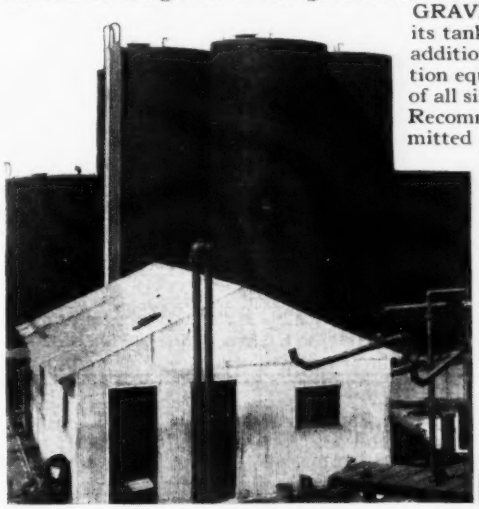

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Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

Tax column includes 1.5c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes

These Prices in Effect Sept. 4, 1933, as Posted by Principal Marketing Companies

Latest Changes In Tank Wagon Markets

Motor Gasoline

S. O. New Jersey—2c cash discount off posted s.s. price eliminated, thru territory, and new posted s.s. prices established at 1.5c below the former cash price, resulting in an increase of 0.5c in s.s. prices, **Sept. 2.**

This advance increased dealers' margin by 0.5c.

S. O. New York—Correction: In the 0.3c advance thru territory, Aug. 23, reported on page 43 of the Aug. 30 issue of NATIONAL PETROLEUM NEWS, Rochester was up 0.2c, rather than unchanged. New prices that day became: 9.8c, posted dealer; 18.3c t.w. and 19.3c, latter two including 4.5c tax.

Posted dealer price up 0.5c, t.w. and s.s. up 1c, thru territory, except New York City posted dealer price up 0.4c, t.w. and s.s. cut 0.9c, **Sept. 2.**

These changes were made following the elimination the same day of the 2c cash discount at s.s. The dealer thus gets 0.5c additional margin.

The same day, third grade gasoline prices were officially posted at 2c below s.s. prices of Socony, at points where competition requires this grade.

New Haven prices re-instated in table in this issue.

Atlantic Refining—T.w. and s.s. up 0.3c, thru New England, **Aug. 23.**

T.w. and s.s. up 0.5c, thru New Jersey, Maryland, Virginia, North Carolina, **Aug. 26.**

T.w. and s.s. up 4c, Brunswick, to 22c and 23c respectively, **Aug. 28.**

T.w. and s.s. up 1c, Jacksonville, to 21c and 22c, **Aug. 28.**

S.s. cash discounts eliminated at points in its territory where such discounts had been in effect, **Sept. 1.**

S. O. Ohio—2c cash discount at s.s. eliminated, and posted s.s. prices cut 2c, thru Ohio, **Sept. 2.** New statewide prices are: Ethyl, 20c; X-70, 18c; and Renown Green, 16.5c, all including 5.5c tax. T.w. was unchanged, at 19c for Ethyl, and 17c for X-70.

All other s.s. discounts, including those to commercial consumers and governmental bodies, discontinued.

Governmental units will get Q.D.A. given to contract customers.

Renown Green discount to dealers and commercial consumers cut 2c, to 1.75c off posted s.s. price, **Sept. 2.**

T.w. and s.s. up 1c, all grades of gasoline, thru Ohio, Sept. 7. This advance is not reflected in the prices in this table, since those prices are those in effect **Sept. 4.**

S. O. Kentucky—**Crown** and **Kyso** gasolines up 1c, generally thru territory, Aug. 28. Exceptions: Crown gasoline, Lexington up 2c. **Kyso** gasoline: Lexington and Jackson, Miss. up 2.5c; Paducah, Atlanta, Augusta and Macon up 1.5c; and Vicksburg, cut 0.5c.

Other **Kyso** changes on both t.w. and s.s.; Lexington, cut 0.5c, to 18.5c Aug. 30; cut 0.5c, to 16.5c, July 27; Paducah, cut 0.5c to 18.5c, Aug. 29. Louisville, cut 0.5c, to 16.5c, July 26. Jackson, cut 1.5c, to 16.5c, Aug. 18. Macon, up 1.5c, to 18.5c, July 28. Pensacola, up 2c, to 18c, **Aug. 15.**

Other **Crown changes**: Macon, up 2c, to 22c, July 28. Pensacola, up 2c, to 21c **Aug. 15.**

S. O. Indiana—Discount to dealers and agents up 0.5c, on gasoline, to 3c on Red Crown and Ethyl, and 2c on Stanolind (third grade), **Sept. 1.** These discounts are off s.s. price.

S. O. Nebraska—Red Crown t.w. and s.s. cut 0.5c, McCook, both to 16c, and Reliance gasoline cut 1.5c, both to 11.9c, **Aug. 26.**

S. O. Louisiana—2c cash discount at s.s. eliminated, thru territory, and s.s. prices established at 1.5c below these former cash s.s. prices, resulting in an increase of 0.5c at s.s., **Sept. 2.** T.w. unchanged, thus increasing dealers' margin 0.5c.

Magnolia Petroleum—Mobilgas and Metro—t.w. and s.s. up 0.5c, Fort Smith and Little Rock, **July 26.** Mobilgas at Fort Smith is 18.4c, and at Little Rock 20.9c, including taxes. Metro at Fort Smith is 14.5c t.w. and 15.5c s.s., and at Little Rock, 16c and 17c.

Aviation Gasoline

Colonial Beacon—Correction: T.w. price, Boston, has been 21.5c, including 4.5c tax, since **April 23.** A cut of 0.5c was made that date.

Kerosine

S. O. New York—T.w. up 0.5c, thru territory, **Sept. 2.**

Atlantic Refining—Cut 0.5c, Camden, to 9c t.w., **Aug. 24.**

S. O. Kentucky—Up 2c, Augusta, to 13c t.w., **Aug. 21.**

S.O. NEW JERSEY TERRITORY

	Essolene Posted Tank Car	Retail T.W.	Taxes	Posted S.S.	Kerosine T.W
Atlantic City, N. J.	7.2	13.7	4.5	17.7	9
Newark, N. J.	6.5	13	4.5	17	8.5
Annapolis, Md.	6.8	13.3	5.5	18.3	9
Baltimore, Md.	6.3	12.8	5.5	17.8	8
Cumberland, Md.	7.8	14.3	5.5	19.3	11.7
Washington, D. C.	6.5	13	3.5	16	10
Danville, Va.	7.9	14.4	6.5	20.4	10.9
Norfolk, Va.	6.4	12.9	6.5	18.9	10.3
Petersburg, Va.	7.2	13.7	6.5	19.7	10.7
Richmond, Va.	6.8	13.3	6.5	19.3	10.7
Roanoke, Va.	8	14.5	6.5	20.5	11
Charleston, W. Va.	7.2	13.7	5.5	18.7	11.6
Parkersburg, W. Va.	6.5	13	5.5	18	10.2
Wheeling, W. Va.	7.2	13.7	5.5	18.7	11.2
Charlotte, N. C.	8.6	15.1	7.5	22.1	12.5
Hickory, N. C.	8.9	15.4	7.5	22.4	12.7
Mt. Airy, N. C.	8.9	15.4	7.5	22.4	12.8
Raleigh, N. C.	8.4	14.9	7.5	21.9	12.3
Salisbury, N. C.	8.7	15.2	7.5	22.2	12.6
Charleston, S. C.	6.4	12.9	7.5	19.9	10.3
Columbia, S. C.	8.2	14.7	7.5	21.7	12.2
Spartanburg, S. C.	8.6	15.1	7.5	22.1	12.5

Note: Posted retail t.w. prices which are being continued mostly to satisfy existing contracts based on them, are fixed at 1c under posted s.s. prices. T.w. prices shown above are exclusive of taxes.

Price basis to dealers: Dealer contracts for Essolene are written at 2½c over posted tank car prices. Lease and license dealers, 1c per gal. rental, 0.5c license.

Price basis to commercial consumers: on Essolene, on t.w. deliveries on yearly basis, over posted tank car prices: 1,000 to 74,999 gals., 2.5c; 75,000 to 299,999 gals., 1.5c; 300,000 gals. and over, 1c.

Kerosine Discount: 1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore City—contract not necessary) except New Jersey.

S. O. NEW YORK

	Posted Dealer	Socony Gasoline Taxes	Total T.W.	S.S.	Kerosine T.W.
*Blissville (New York City including all boroughs)	9.4	4.5	16.4	17.4	8.5
Albany, N. Y.	9.6	4.5	16.6	17.6	9.5
Syracuse, N. Y.	10.1	4.5	17.1	18.1	9
Rochester, N. Y.	10.3	4.5	17.3	18.3	9.5
Buffalo, N. Y.	10.2	4.5	17.2	18.2	9.5
Burlington, Vt.	11.3	5.5	19.3	20.3	9
Manchester, N. H.	10.7	5.5	18.7	19.7	8.5
Hartford, Conn.	9.9	3.5	15.9	16.9	8.5
New Haven, Conn.	8.7	3.5	15.7	16.7	8.5
East Providence, R. I.	9.5	3.5	15.5	16.5	8.5
Boston, Mass.	9.5	4.5	16.5	17.5	8.5
Portland, Me.	9.7	5.5	17.7	18.7	8.5
Bangor, Me.	10	5.5	18	19	9

***Price basis for New York City, all boroughs, is Blissville, beginning July 1.**

Third Grade Gasoline

Offered only at points where competition requires, at s.s., 2c below s.s. prices of Socony. Dealers get 2c margin.

ATLANTIC REFINING

Atlantic White Flash Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Pittsburgh, Pa.	12	4.5	16.5	17.5	9
Philadelphia, Pa.	12	4.5	16.5	17	9
Allentown, Pa.	12	4.5	16.5	17.5	9
Erie, Pa.	12	4.5	16.5	17.5	9
Scranton, Pa.	12	4.5	16.5	17.5	9
Altoona, Pa.	12	4.5	16.5	17.5	9
Dover, Del.	12	4.5	16.5	17.5	9
Wilmington, Del.	12	4.5	16.5	17.5	9
Boston, Mass.	13	4.5	17.5	18.5	8
Springfield, Mass.	13.6	4.5	18.1	19.1	8
Worcester, Mass.	13.5	4.5	18	19	8
Fall River, Mass.	13.1	4.5	17.6	18.6	8
Providence, R. I.	13	3.5	16.5	17.5	8

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel.

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel; 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 2/25c; Missouri, gasoline, 1.5c per bbl., in lots of 10 bbls. or more; Nebraska, 3/50c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. n lots of more than 50 bbls., 1/5c in lots less than 50 bbls.: South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 1/25c.

Kerosine inspection fees only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3/5c for next 3; 2/5c for next 5; 3/10c for next 15, and 1/5c per gal. in lots over 25 bbls.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

Tax column includes 1.5c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes
These Prices in Effect Sept. 4, 1933, as Posted by Principal Marketing Companies

ATLANTIC REFINING (Cont'd)

Atlantic White Flash Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Hartford, Conn.	13.4	3.5	16.9	17.9	8
New Haven, Conn.	13.2	3.5	16.7	17.7	8
Atlantic City, N. J.	13.7	4.5	18.2	19.2	9
Camden, N. J.	13.2	4.5	17.7	18.7	9
Trenton, N. J.	13.3	4.5	17.8	18.8	9
Annapolis, Md.	13.3	5.5	18.8	19.8	9
Baltimore, Md.	12.8	5.5	18.3	19.3	8
Hagerstown, Md.	13.8	5.5	19.3	20.3	9
Richmond, Va.	13.3	6.5	19.8	20.8	10.7
Wilmington, N. C.	13	7.5	20.5	21.5	10.4
Brunswick, Ga.	14.5	7.5	22	23	13
Jacksonville, Fla.	12.5	8.5	21	22	12.5

Dealer discount: on gasoline "split dealers," 2c off posted t.w. price; to 100% dealers, 2.5c; to authorized dealers (under lease 1c per gal.), 2.5c off posted s.s. price. Commercial accounts, under contract for one year, are sold at a discount off the posted prices, with due consideration to competition.

*Georgia kerosine prices include 1c state tax.

S. O. OHIO

Sohio X-70 Gasoline

Ohio statewide	11.5	5.5	17	18	*12.5

Renown Green (Third Grade)

Ohio statewide		5.5		16.5	*12.5

*Kerosine prices include 1c state tax, effective July 22, 1933. Kerosine t.w. in Allen, Mahoning, Paulding, Putnam, Trumbull and Van Wert counties is 11.5c.

Discounts: To dealers and commercial consumers, off posted t.w. price: on Ethyl and X-70, 2c. On Renown Green, 1.75c off posted s.s. price. Kerosine, 2.5c off t.w.

To contract customers per month: up to 6,250 gals., open dealers' price; 6250 to 25,000 gals., 0.5c off open dealers' price; over 25,000 gals., 1c off open dealers' price.

Prices to governmental units to be Q.D.A. bracket applicable to the gallons specified and the period indicated. State highway departments to get bids on basis of full 1c Q.D.A.

S. O. KENTUCKY

Crown Gasoline

Lexington, Ky.	15.5	6.5	22	22	10
Louisville, Ky.	13.5	6.5	20	20	10
Paducah, Ky.	15.5	6.5	22	22	9
Covington, Ky.	14.5	6.5	21	21	11.5
Jackson, Miss.	14.5	7.5	22	22	*11
Vicksburg, Miss.	13.5	7.5	21	21	*11
Birmingham, Ala.	16.5	*8.5	25	25	13
Mobile, Ala.	14.5	*8.5	23	23	10
Montgomery, Ala.	16.5	*9.5	26	26	*14
Macon, Ga.	15.5	7.5	23	23	*13
Atlanta, Ga.	15.5	7.5	23	23	*10
Augusta, Ga.	15.5	7.5	23	23	*13
Savannah, Ga.	15.5	7.5	23	23	*14
Jacksonville, Fla.	13.5	8.5	22	22	12.5
Miami, Fla.	14.5	8.5	23	23	13.5
Tampa, Fla.	14.5	8.5	23	23	12.5
Pensacola, Fla.	12.5	*9.5	22	22	13.5

Kyso (Third Grade)

Lexington, Ky.	12	6.5	18.5	18.5	10
Louisville, Ky.	11	6.5	17.5	17.5	10
Paducah, Ky.	12	6.5	18.5	18.5	9
Covington, Ky.	12.5	6.5	19	19	11.5
Jackson, Miss.	11.5	7.5	19	19	*11
Vicksburg, Miss.	10	7.5	17.5	17.5	*11
Birmingham, Ala.	13.5	*8.5	22	22	13
Mobile, Ala.	11.5	*8.5	20	20	10
Montgomery, Ala.	13	*9.5	22.5	22.5	*14
Atlanta, Ga.	12.5	7.5	20	20	*10
Augusta, Ga.	12.5	7.5	20	20	*13
Macon, Ga.	12.5	7.5	20	20	*13
Pensacola, Fla.	9.5	*9.5	19	19	13.5

Dealer Discount: on Crown and Crown Ethyl gasolines, 3c off t.w. price thru territory: Kyso 2c. Effective Nov. 21, in Jefferson county, Ala., including Birmingham, major oil companies give 2c per gal. off s.s. price for cash, to buyers at stations, in any quantity. Effective Jan. 14, 1933, 2c per gal. discount off s.s. price for cash at Louisville by S. O. Kentucky.

***Taxes:** in the tax columns are included these city and county gasoline taxes at the following points: Birmingham, 1c city; Mobile, 1c city: Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Mississippi kerosine prices include 1c state tax; Montgomery kerosine price includes ½c city tax

S. O. INDIANA

Standard Red Crown Gasoline

Chicago, Ill.	11.8	*4.5	16.3	16.3	8.7
Decatur, Ill.	12.2	*4.5	16.7	16.7	9.2
E. St. Louis, Ill.	11.5	*4.5	16	16	8.5
Joliet, Ill.	12.2	*4.5	16.7	16.7	9.2
Peoria, Ill.	12.2	*4.5	16.7	16.7	9.2
Quincy, Ill.	12	*4.5	16.5	16.5	9

S. O. INDIANA (Cont'd)

Standard Red Crown Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Springfield, Ill.	12.2	*4.5	16.7	16.7	9.2
Indianapolis, Ind.	12.2	5.5	17.7	17.7	‡13.2
Evansville, Ind.	12	5.5	17.5	17.5	‡13
South Bend, Ind.	12.5	5.5	18	18	‡13.5
Detroit, Mich.	12	4.5	16.5	16.5	9.5
Grand Rapids, Mich.	12.2	4.5	16.7	16.7	9.2
Saginaw, Mich.	12.5	4.5	17	17	9.5
Marquette, Mich.	12.8	4.5	17.3	17.3	9.8
Green Bay, Wisc.	12.2	5.5	17.7	17.7	9.2
Madison, Wisc.	11.9	5.5	17.4	17.4	8.9
Milwaukee, Wisc.	11.7	5.5	17.2	17.2	8.7
La Crosse, Wisc.	12.8	5.5	18.3	18.3	9.8
Minneapolis, Minn.	12.4	4.5	16.9	16.9	9.4
Duluth, Minn.	12.7	4.5	17.2	17.2	9.4
Mankato, Minn.	12.3	4.5	16.8	16.8	9.3
Des Moines, Iowa	12.1	4.5	16.6	16.6	8
Sioux City, Iowa	11.7	4.5	16.2	16.2	8.7
Davenport, Iowa	12.1	4.5	16.6	16.6	9.1
Mason City, Iowa	12.1	4.5	16.6	16.6	9.1
St. Louis, Mo.	10.7	†4	14.7	14.7	7.7
Kansas City, Mo.	11.2	†4.5	15.7	15.7	6.5
St. Louis, Mo.	10.8	†4.5	15.3	15.3	7.8
Fargo, N. D.	14.1	4.5	18.6	18.6	11.1
Grand Forks, N. D.	14.4	4.5	18.9	18.9	11.4
Minot, N. D.	14.1	4.5	18.6	18.6	11.1
Pierre, S. D.	13.1	*5.5	18.6	18.6	10.1
Huron, S. D.	13.4	*5.5	18.9	18.9	10.4
Wichita, Kans.	10.1	4.5	14.6	14.6	7.1
Bartlesville, Okla.	9.5	5.5	15	17	8.5

Note: Kerosine s.s. prices are generally 3c above normal t.w. price.

Stanolind Gasoline (Third Grade)

Stanolind prices are 1.5c under Red Crown, thru territory, except at following points:

Bartlesville, Okla.	7.5	5.5	13	14	8.5
Quincy, Ill.	9.3	*4.5	13.8	13.8	9
Mason City, Ia.	8.9	4.5	13.4	14.4	9.1
Kansas City, Mo.	9.7	†4.5	14.2	12.5	6.5
Green Bay, Wisc.	10.7	5.5	16.2	15.5	9.2
Grand Forks, N. D.	10.5	4.5	15	17.4	11.4

†St. Louis tax includes 0.5c city tax; Kansas City and St. Joseph, 1c city tax. ‡Includes 4c state tax.

*Illinois collects a sales tax of 2%, to cover which Standard charges 0.2c per gallon on gasoline, kerosine and naphtha; this tax is included in t.w. and s.s. columns in above table for gasoline, but not in tax column. South Dakota gasoline and kerosine prices include 0.1c sales tax.

Q.D.A. effective July 1, 1933:

Discounts to dealers and AAA commissions, thru territory, off s.s. price: Ethyl and Red Crown gasoline, 3c; Stanolind 2c. Rentals on gallonage basis, give dealers 0.5c additional.

Discounts to consumers (large consumers and governmental units), thru territory, except Chicago, off t.w. price: Ethyl and Red Crown, 2c; Stanolind 1c. In Chicago, 0.5c additional.

S. O. NEBRASKA

Standard Red Crown Gasoline

Omaha, Neb.	11.8	5.5	17.3	18.3	9.8
McCook, Neb.	10.5	5.5	16	16	9
Norfolk, Neb.	12.3	5.5	17.8	18.8	10.3
North Platte, Neb.	13.3	5.5	18.8	19.8	11
Scottsbluff, Neb.	12.8	5.5	18.3	18.3	10

Reliance Gasoline (Third Grade)

Reliance gasoline prices are 1.5c below Red Crown, beginning July 1, 1933, except at following points.

McCook, Neb.	6.4	5.5	11.9	11.9	9
North Platte, Neb.	11.8	5.5	17.3	17.4	11
Scottsbluff	11.8	5.5	17.3	17.3	10

Discounts: Q.D.A., effective June 30, 1933: on t.w. deliveries of gasoline, to large industrial users and governmental units, on monthly purchases of 500 gals., or yearly purchases of 6,000 gals. 2c off s.s. on Ethyl and Red Crown, and 1c on Reliance.

To dealers and AAA commissions: off s.s. price, Ethyl and Red Crown, 2.5c; Reliance, 1.5c. Rentals under lease and agency, 0.5c per gal. additional.

S. O. LOUISIANA

	Posted Tank Car	Essolene Posted Retail T.W.	Taxes	Posted S.S.	Kerosine T.W.
Little Rock, Ark.	5.9	11.9	8.5	19.9	10
Alexandria, La.	5.9	11.9	*7.5	18.9	*11
Baton Rouge, La.	6	12	6.5	18	*11
New Orleans, La.	5.8	11.8	*7.5	18.8	*12
Lake Charles, La.	6	12	*7.5	19	*11
Shreveport, La.	4.8	10.8	6.5	16.8	*11
Lafayette, La.	6.1	12.1	*7.5	19.1	*11
Bristol, Tenn.	8.6	14.6	8.5	23.6	13
Chattanooga, Tenn.	7.9	13.9	8.5	21.9	11
Knoxville, Tenn.	8.2	14.2	8.5	22.2	12.5
Memphis, Tenn.	6.6	12.6	8.5	20.6	10
Nashville, Tenn.	7.5	13.5	8.5	21.5	10

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax, 1c federal tax, and 1c parish tax. Louisiana kerosine prices include 1c state tax; New Orleans includes also 1c parish tax.

Note: Posted retail t.w. gasoline prices, being continued mostly to satisfy existing contracts based on them, are fixed at 1c under posted s.s. prices. T.w. prices shown above are exclusive of taxes.

Cash discounts at service stations: on Essolene, 2c per gal. thru territory, effective June 2, 1933.

Price basis to dealers: prices to uncontrolled dealer accounts, 2.5c over tank car prices, and controlled dealers, thru new lease and license agreements, get 0.5c additional, or 2c over t.c. price, effective June 2, 1933.

Price basis to commercial consumers: on t.w. deliveries, on yearly basis, figured over posted tank car prices: 1,000 to 74,999 gals., 2.5c over; 75,000 to 299,999 gals., 1.5c; and 300,000 gals. and over, 1c.

MAGNOLIA PETROLEUM

	T.W.	Taxes	Mobilgas Total T.W.	S.S.	Kerosine T.W.
Muskogee, Okla.	9.5	5.5	15	17	7
Oklahoma City	9.5	5.5	15	17	7.5
Tulsa, Okla.	9.5	5.5	15	17	7
Fort Smith, Ark.	12.9	5.5	18.4	18.4	10
Little Rock, Ark.	13.4	7.5	20.9	20.9	10
Texarkana, Ark.	12	*5.5	17.5	17.5	11
Dallas, Tex.	9.5	5.5	15	17.5	7.5
Fort Worth, Tex.	9.5	5.5	15	17.5	7.5
Houston, Tex.	9.5	5.5	15	17.5	8
San Antonio, Tex.	10	5.5	15.5	18	8
El Paso, Tex.	10	5.5	15.5	18	8

Metro Gasoline (Third Grade)

Muskogee, Okla.	8.5	5.5	14	15	7
Oklahoma City	8.5	5.5	14	15	7.5
Tulsa, Okla.	8.5	5.5	14	15	7
Fort Smith, Ark.	9	5.5	14.5	15.5	10
Little Rock, Ark.	8.5	7.5	16	17	10
Texarkana, Ark.	7	5.5	12.5	13.5	11
Dallas, Tex.	7	5.5	12.5	13.5	7.5
Fort Worth, Tex.	7	5.5	12.5	13.5	7.5
Houston, Tex.	7	5.5	12.5	13.5	8
San Antonio, Tex.	8	5.5	13.5	14.5	8
El Paso, Tex.	8	5.5	13.5	14.5	8

Dealer discounts: on Mobilgas 2.5c off t.w. price at Texarkana; at Little Rock and Ft. Smith, 4.5c off. On Metro gasoline, 1c per gal. off t.w. price thru territory. Arkansas kerosine prices, 2c discount off t.w. price.

*In Texarkana, 4c Texas tax applies; outside Texarkana, 6c Arkansas tax applies.

†In Fort Smith, 4c Oklahoma tax applies; outside Fort Smith, 6c Arkansas tax applies.

CONTINENTAL OIL

Conoco Gasoline

Denver, Col.	13	5.5	18.5	20.5	11.5
Pueblo, Col.	13	5.5	18.5	20.5	13
Grand Junc., Col.	15	5.5	20.5	22.5	15
Casper, Wyo.	14	5.5	19.5	21.5	10.5
Cheyenne, Wyo.	12	5.5	17.5	19.5	12
Butte, Mont.	16.5	6.5	23	25	17.5
Helena, Mont.	18	6.5	24.5	26.5	17.5
Salt Lake City, Utah	16	5.5	21.5	23.5	16
Boise, Ida.	18	6.5	24.5	26.5	18
Twin Falls, Ida.	18	6.5	24.5	26.5	18
Albuquerque, N. M.	12	†7	19	21.5	12

Third Grade Gasoline

Denver, Col.	12	5.5	17.5	18.5	11.5
Cheyenne, Wyo.	11	5.5	16.5	17.5	12
Helena, Mont.	17	6.5	23.5	24.5	17.5
Salt Lake City, Utah	15	5.5	20.5	21.5	16
Boise, Ida.	17	6.5	23.5	24.5	18
Albuquerque, N. M.	11	†7	18	19	12

*Not sold thru tank wagon.
†Includes city tax of 0.5c.

Discounts, effective June 1, 1933: to dealers, and lease and license accounts, off s.s. price, thru territory, except N. Mex.: Conoco gasoline, 2.5c; third grade, 1.5c.

Consumers and governmental agencies pay posted t.w. price.

S. O. CALIFORNIA

Standard Gasoline

San Francisco, Cal.	12.5	4.5	17	19.5	12.5
Los Angeles, Cal.	11.5	4.5	16	18.5	12.5
Fresno, Cal.	13	4.5	17.5	20	14
Phoenix, Ariz.	11	6.5	17.5	20	†16
Reno, Nev.	15	5.5	20.5	23	15.5
Portland, Ore.	13.5	6.5	20	22.5	13.5
Seattle, Wash.	13.5	6.5	20	22.5	13.5
Spokane, Wash.	16.5	6.5	23	25.5	18
Tacoma, Wash.	13.5	6.5	20	22.5	13.5

Tank Wagon, Service Station Markets for Gasoline and Kerosine

Tax column includes 1.5c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes

These Prices in Effect Sept. 4, 1933, as Posted by Principal Marketing Companies

S. O. CALIFORNIA (Cont'd)

Flight Gasoline (Third Grade)

	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
San Francisco, Cal.	10.5	4.5	15	16	12.5
Los Angeles, Cal.	9.4	4.5	13.9	14.9	12.5
Fresno, Cal.	11	4.5	15.5	16.5	14
Reno, Nev.	13	5.5	18.5	19.5	15.5
Phoenix, Ariz.	8.5	6.5	15	16	†16
Portland, Ore.	12	6.5	18.5	19.5	13.5
Seattle, Wash.	12	6.5	18.5	19.5	13.5
Tacoma, Wash.	12	6.5	18.5	19.5	13.5
Spokane, Wash.	15	6.5	21.5	22.5	18

†Includes 5c state tax.

Discounts: On all gasolines: to 100% dealers 1c off t.w. price thru territory.

CANADA

Prices of Imperial Oil Ltd.

Per Imperial Gallon, which is 1.2 U. S. Gallons

Imperial Three Star Gasoline

Hamilton, Ont.	19.5	6	25.5	26.5	16.5
Toronto, Ont.	19.5	6	25.5	26.5	16.5
Brandon, Man.	23	7	30	33.5	21.5
Winnipeg, Man.	20	7	27	30.5	18.5
Regina, Sask.	24	6	30	34	22.5
Saskatoon, Sask.	26	6	32	36	24.5
Edmonton, Alta.	24.5	6	30.5	34.5	23.5
Calgary, Alta.	21	6	27	31	20
Vancouver, B. C.	22	7	29	29.5	23
Montreal, Que.	17	6	23	26	16
St. John, N. B.	18.5	7	25.5	29.5	21.5
Halifax, N. S.	18.5	6	24.5	28.5	21.5

Discount to dealers and A.R.A. Commissions: thru Ontario and Quebec, 3c off s.s. price; rentals on gallonage basis give dealers 1c additional.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories (Stanavo aviation in all territories except Magnolia Petroleum and Continental Oil Co.). Tax column includes 1.5c federal tax, and state tax; also municipal taxes as indicated in footnotes.

S. O. NEW JERSEY

Prices in Effect Sept. 4, 1933

	T.W.	Tax	Total T.W.
Newark, N. J.	16	1.5	17.5
Baltimore, Md.	15	5.5	20.5
Washington, D. C.	16.3	3.5	19.8

Discounts: to dealers and contract consumers, 2c per gal. off posted t.w. price.

COLONIAL BEACON OIL CO.

New York City	16.5	4.5	21
Boston, Mass.	17	4.5	21.5

S. O. PENNSYLVANIA

Philadelphia, Pa.	13.5	4.5	18
Pittsburgh, Pa.	16	4.5	20.5
Altoona, Pa.	16	4.5	20.5
Harrisburg, Pa.	13.5	4.5	18

Discounts: to dealers and contract consumers 2c per gal. off posted t.w. price.

S. O. OHIO

Thru Ohio	14.5	5.5	20

Discounts: to airports, 1 to 4c, based on quantity

S. O. INDIANA

Chicago, Ill.	†14.8	4.5	†19.3
Indianapolis, Ind.	15.2	5.5	20.7
Detroit, Mich.	15.5	4.5	20
Milwaukee, Wisc.	14.7	5.5	20.2
Minneapolis, Minn.	15.4	4.5	19.9
St. Louis, Mo.	13.7	3.5	17.2
Kansas City, Mo.	14.2	*4.5	18.7
Fargo, N. D.	17.1	4.5	21.6
Huron, S. D.	**16.4	5.5	**21.9
Wichita, Kans.	13.1	4.5	17.6

*Includes 1c city tax.

**Includes 0.1c to cover sales tax.

†Includes 0.2 cent to cover Ill. 2% sales tax.

S. O. LOUISIANA

Little Rock, Ark.	20.5	7.5	28
New Orleans, La.	19.5	*7.5	27
Shreveport, La.	19.5	6.5	26
Chattanooga, Tenn.	22.5	8.5	31
Memphis, Tenn.	20.5	8.5	29

Dealer and commercial consumer discount: 2c off posted retail t.w.

*Includes 1c parish tax.

MAGNOLIA PETROLEUM

	T.W.	Tax	Total T.W.
Dallas, Tex.	10.5	5.5	16

CONTINENTAL OIL CO.

Denver, Colo.	16	5.5	21.5
Cheyenne, Wyo.	17	5.5	22.5
Helena, Mont.	21	6.5	27.5
Salt Lake City, Utah	19	5.5	24.5
Albuquerque, N. M.	15	*7	22
Boise, Ida.	21	6.5	27.5

*Includes city tax of 0.5c.

S. O. CALIFORNIA

Phoenix, Ariz.	14	6.5	20.5
Los Angeles, Cal.	14.5	4.5	19
San Francisco, Cal.	15.5	4.5	20
Reno, Nev.	18	5.5	23.5
Portland, Ore.	16.5	6.5	23
Seattle, Wash.	16.5	6.5	23
Spokane, Wash.	19.5	6.5	26

Note: Above prices are in tank trucks or iron barrels. For deliveries direct into airplane fuel tanks, 2.5c per gal. additional.

Naphtha Prices

Prices in Effect Sept. 4, 1933

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	††11.9	††13.9	††13.2
Detroit	15.4	16	16.5
Kansas City	†13	†14.5	†15.3
Milwaukee	*17.5	*19	*19.8
Minneapolis	**17.8	**19.3	**20.1
St. Louis	12.7	14.2	15
New York	...	13	15
Boston	...	17	16
Philadelphia	...	15	..

*Includes 4c state tax. †Includes 1c city tax.

**Includes 3c state tax. ††Includes 0.2 cent to cover Ill. 2 per cent sales tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)

New York Harbor	9-9.5
Philadelphia district	9-9.5
Providence	9-9.5

Tank Wagon or Steel Barrels

New York City	13
Syracuse	15
Rochester (net price)	15
Buffalo (net price)	14
Providence	17
Boston	17
Bridgeport	13.5
Newark	12
Philadelphia	12.5
Lancaster	17
Altoona	17
Baltimore	*14

Note: 2c off above t.w. prices to large buyers in some instances. *4c discount allowed on 200 gal. or more in Baltimore only, with 1c premium for steel barrels.

Fuel Oil

Following are tank wagon prices of various grades of fuel oil at the points shown in various territories. Prices are in cents per gallon:

Prices in Effect Sept. 4, 1933

	No. 1	No. 2	No. 3	No. 4
S. O. New Jersey				
Newark, N. J.	8	6.5	....	6
Atlantic City, N. J.	8	6.5	....	6
Baltimore, Md.	8	6.50	....	5
Washington, D. C.	8.25	6.75	....	6.25
S. O. New York				
New York City	7.5	6.5	6.5	5.5
Albany, N. Y.	7.5	6.5	6.5	5.5
Rochester, N. Y.	7.5	6.5	6.5	5.5
Boston, Mass.	7.5	6.5	6.5	5.5
Augusta, Me.	8	6.5	6.5	5.5
Manchester, N. H.	8	6.5	6.5	5.5
Burlington, Vt.	7.5	6.5	6.5	5.5
New Haven, Conn.	7.5	6.5	6.5	5.5
Providence, R. I.	7.5	6.5	6.5	5.5
Atlantic Refining				
Philadelphia, Pa.	7.5	6	6	5.5
Allentown, Pa.	8.5	7	7	....
Wilmington, Del.	8	6.5	6	....
Springfield, Mass.	7.5	6.5	6.5	....
Worcester, Mass.	7.5	6.5	6.5	....
Hartford, Conn.	7.5	6.5	6.5	....
S. O. Ohio				
Ohio Statewide	7.5	7	6.5	6.25

Note: S. O. Ohio prices are for hose dumps; bucket dumps are 0.5c per gallon higher.

S. O. Indiana

Stanolex Fuel Oil No. 1

Chicago	7.75
Indianapolis, Ind.	*12.2
Detroit, Mich.	8.5
Madison, Wis.	7.9
Minneapolis, Minn.	8.4
Sioux City, Ia.	9.1
St. Louis, Mo.	6.7
Kansas City, Mo.	6.7

*Includes state tax of 4c.

Discounts: at Chicago, Indianapolis and Detroit, 1c off t.w. price for deliveries of 100 gals. and over; at other above points, 1c off t.w. price for deliveries 150 gals. and over.

Crude Price Changes

TULSA.—Sept. 6 Stanolind Crude Oil Purchasing Co. met the Carter's advance in Oklahoma and Kansas, by posting a 10-cent advance, to new price range of $0.58 for below 29 gravity, plus 2 cent differential, to top grade of 40 and above, at $0.82. Stanolind's prices in North, North Central and Central Texas, which were not advanced during the last 10 cent advance Aug. 25, were raised 15 cents, meeting the Humble, to new price range of $0.53 to $0.77, with the same gravity schedule as Oklahoma-Kansas.

Thus, the Stanolind is paying 5 cents higher for Oklahoma-Kansas crude than for Texas.

NEW ORLEANS.—Sept. 6 Standard Oil Co. of Louisiana advanced all North Louisiana and Arkansas crudes 15 cents. This advance affects Caddo, Homer, Haynesville, Sabine, De Soto, Sarepta, Carterville, El Dorado and Miller county.

It raised Nevada, Ark. 5 cents, to new price of $0.40, and Smackover, 15 cents, to new price of $0.50 per barrel.

The new price ranges in the fluids where gravity schedules are in effect are: (Gravity schedules beginning with below 29 and ending with 40 and above, and differential being 2 cents, in each case):

Caddo, $0.48 to $0.72.

Homer, $0.54 to $0.78.

Haynesville, $0.50 to $0.74.

Sabine and De Soto, $0.55 to $0.79.

Sarepta and Carterville, $0.58 to $0.82.

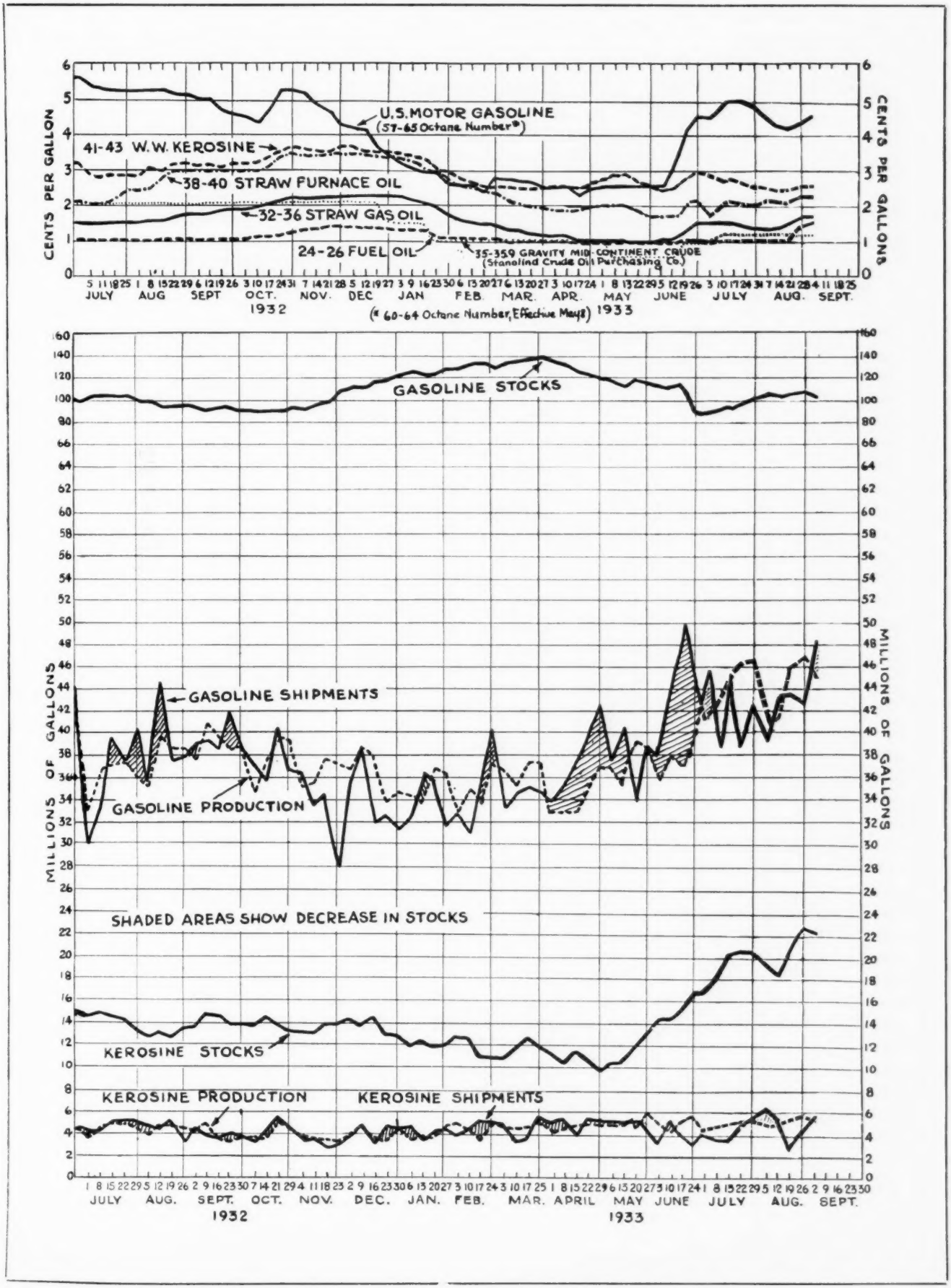
El Dorado, $0.60 to $0.84.

Miller county, Ark., $0.44 to $0.68.

(see page 56)

Barometer of Mid-Continent Refinery Market—Week Ended September 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 76 Plants to National Petroleum News


CENTS PER GALLON
CENTS PER GALLONS
U.S. MOTOR GASOLINE (57-65 Octane Number*)
41-43 W.W. KEROSINE
38-40 STRAW FURNACE OIL
32-36 STRAW GAS OIL
24-26 FUEL OIL
35-35.9 GRAVITY MID-CONTINENT CRUDE (Stanolind Crude Oil Purchasing Co.)
JULY AUG SEPT OCT. NOV. DEC JAN FEB. MAR. APR. MAY JUNE JULY AUG. SEPT.
1932
1933
(* 60-64 Octane Number, Effective May 8)
GASOLINE STOCKS
MILLIONS OF GALLONS
GASOLINE SHIPMENTS
GASOLINE PRODUCTION
SHADED AREAS SHOW DECREASE IN STOCKS
KEROSINE STOCKS
KEROSINE PRODUCTION
KEROSINE SHIPMENTS
JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APRIL MAY JUNE JULY AUG. SEPT.
1932
1933

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended Sept. 1 (By Teletype)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Sept. 1
Plants Operating	10	23	23	10	10	76
Da. Av. Cap. Bbls.	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs	80,207 + 8.2	91,975 — 9.1	46,361 + 6.0	10,662 + 55.1	47,673 + 3.8	276,878 + 1.9
Da. Av. Other Oils	7,363 + 19.3	4,733 — 2.5	1,292 — 31.3	136	14,822 — 13.6	28,346 — 5.7
GASOLINE—Gallons						
Stocks, Aug. 25	27,468,000	52,122,000	17,461,000	3,524,000	7,560,000	108,135,000
Prod. 8-25 to 9-1	14,073,000 + 1.8	15,464,000 — 11.8	7,562,000 — 0.5	857,000 — 27.3	7,071,000 + 0.2	45,027,000 — 3.3
Ship. 8-25 to 9-1	13,003,000 + 16.9	21,095,000 + 29.9	4,846,000 — 32.1	1,014,000 — 1.9	8,278,000 + 17.0	48,236,000 +13.2
Stocks, Sept. 1	28,538,000 + 3.9	46,491,000 — 10.8	20,177,000 + 15.6	3,367,000 — 4.5	6,353,000 — 16.0	104,926,000 — 3.0
Ratio Sales to Prod.	92.4%	136.4%	64.1%	118.3%	117.1%	107.2%
KEROSINE—Gallons						
Stocks, Aug. 25	9,402,000	10,016,000	2,230,000	128,000	613,000	22,389,000
Prod. 8-25 to 9-1	2,503,000 + 3.3	1,874,000 — 22.0	538,000 + 3.9	....	576,000 — 1.2	5,491,000 — 7.9
Ship. 8-25 to 9-1	1,998,000 + 47.0	2,770,000 + 25.7	428,000 — 15.9	....	561,000 — 7.4	5,757,000 + 23.1
Stocks, Sept. 1	9,907,000 + 5.4	9,120,000 — 8.9	2,340,000 + 4.9	128,000 0	628,000 + 2.4	22,123,000 — 1.2
Ratio Sales to Prod.	79.8%	147.8%	79.6%	.....	97.4%	104.8%
FURNACE OIL—Gallons						
Stocks, Aug. 25	2,610,000	11,894,000	622,000	.....	50,000	15,176,000
Prod. 8-25 to 9-1	354,000 — 22.0	1,048,000 — 8.6	137,000 + 63.0	....	28,000 — 42.9	1,567,000 — 6.8
Ship. 8-25 to 9-1	639,000 +150.5	724,000 +279.1	60,000	....	25,000 — 52.8	1,448,000 +190.1
Stocks, Sept. 1	2,325,000 — 10.9	12,218,000 + 2.7	699,000 + 12.3	....	53,000 + 6.0	15,295,000 + 0.8
Ratio Sales to Prod.	180.5%	69.1%	46.2%	.....	89.3%	92.4%
GAS OIL—Gallons						
Stocks, Aug. 25	4,687,000	20,161,000	8,986,000	2,317,000	7,066,000	43,217,000
Prod. 8-25 to 9-1	1,441,000	1,200,000 + 48.5	—269,000	331,000 — 13.6	2,727,000 — 14.2	5,430,000 + 38.9
Ship. 8-25 to 9-1	1,291,000 +274.2	1,153,000 +136.3	153,000 +104.0	....	2,890,000 — 7.1	5,487,000 + 36.5
Stocks, Sept. 1	4,837,000 + 3.2	20,208,000 + 0.2	8,564,000 — 4.7	2,648,000 + 14.3	6,903,000 — 2.3	43,160,000 — 0.1
Ratio Sales to Prod.	89.6%	96.1%	.....	.....	106.0%	101.0%
FUEL OIL—Gallons						
Stocks, Aug. 25	27,721,000	48,065,000	58,598,000	8,592,000	9,997,000	152,980,000
Prod. 8-25 to 9-1	5,936,000 — 5.3	6,375,000 + 7.3	4,157,000 + 17.7	1,813,000 + 76.4	3,874,000 — 0.3	22,215,000 + 7.2
Ship. 8-25 to 9-1	3,626,000 — 14.2	6,047,000 + 1.2	6,056,000 + 13.3	1,964,000 — 18.8	3,409,000 — 21.3	21,102,000 — 5.4
Stocks, Sept. 1	30,091,000 + 8.5	48,393,000 + 0.7	56,699,000 — 3.2	8,448,000 — 1.7	10,462,000 + 4.7	154,093,000 + 0.7
Ratio Sales to Prod.	60.1%	94.9%	145.7%	108.3%	88.0%	95.0%

Gasoline Produced by Various Methods, Week Ended Sept. 1

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	8,304,000	59.0	8,185,000	52.9	3,601,000	47.6	653,000	76.2	4,320,000	61.1	25,063,000	55.7
Cracked	5,340,000	37.9	5,246,000	33.9	3,365,000	44.5	174,000	20.3	2,405,000	34.0	16,530,000	36.7
Natural	429,000	3.1	2,033,000	13.2	596,000	7.9	30,000	3.5	346,000	4.9	3,434,000	7.6
Total	14,073,000		15,464,000		7,562,000		857,000		7,071,000		45,027,000	

\+ or — columns are % change over previous week.

Oil Code Boosts Gasoline Shipments 5,600,000 Gallons

Staff Special—By Teletype
TULSA, Sept. 5

GASOLINE shipments increased 5,600,000 gallons on the eve of the effective date of the petroleum code, North and West Texas being the only districts which failed to report gains, 76 Mid-Continent refiners reported to NATIONAL PETROLEUM NEWS the week ended Sept. 1. Oklahoma reported a gain of 5,800,000 gallons in gasoline shipments.

Gasoline stocks were reduced 3,200,000 gallons, although Kansas and North Texas reported increases, the latter totaling 2,700,000 gallons. The decrease in Oklahoma gasoline stocks was 5,631,000 gallons.

Kerosine production was reduced 470,000 gallons as shipments gained 1,080,000 gallons, resulting in a decrease of 266,000 gallons in stock.

Furnace oil shipments showed a heavy gain. Stocks gained only 110,000 gallons.

Gas oil stocks were lowered, while fuel oil stocks increased slightly.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Sept. 1. Change in stocks figured from Aug. 4.

GASOLINE

	Gallons
Production	179,143,000
Shipments	176,108,000
Net change in stocks	+3,035,000
Ratio sales to production	98.3%

KEROSINE

	Gallons
Production	21,957,000
Shipments	18,160,000
Net change in stocks	+3,797,000
Ratio sales to production	82.7%

FURNACE OIL

	Gallons
Production	6,308,000
Shipments	3,685,000
Net change in stocks	+2,623,000
Ratio sales to production	58.4%

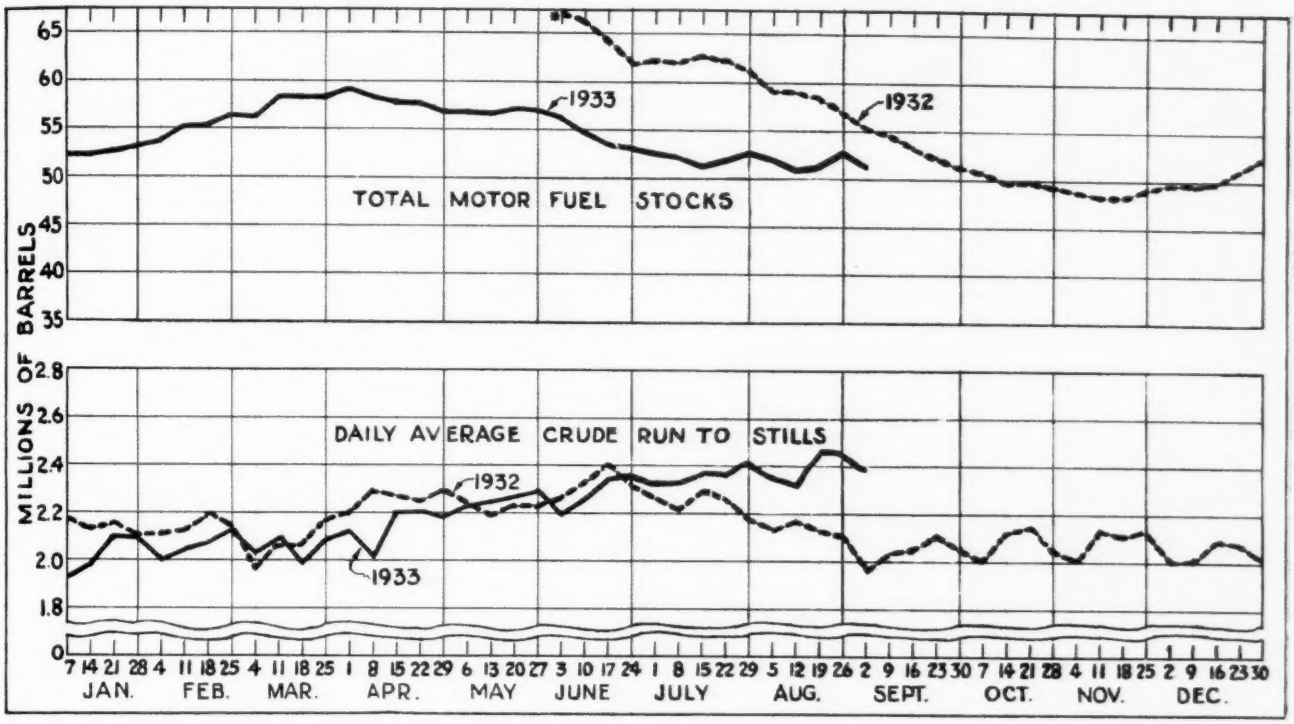
GAS OIL

	Gallons
Production	18,700,000
Shipments	17,330,000
Net change in stocks	+1,370,000
Ratio sales to production	92.7%

FUEL OIL

	Gallons
Production	77,788,000
Shipments	78,509,000
Net change in stocks	—721,000
Ratio sales to production	100.9%

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



***Not available prior to June 4, 1932.**

Bulk Motor Fuel Stocks Drop 1,067,000 Barrels

By Telegraph

NEW YORK, Sept. 6

TOTAL bulk stocks of motor fuel were reduced 1,067,000 barrels in the week ended Sept. 2 as distributors ordered out gasoline to meet the demand of consumers for the Labor Day week-end and in anticipation of higher prices under the new oil code. The stock reduction still was about a hundred thousand barrels less than the stock increase of the previous week.

Another factor in the better stock report was the fact that refiners reduced their crude runs to stills 89,000 barrels daily average. Runs for the week averaged 2,384,000 barrels at refineries with 92.2 per cent of the nation's total still capacity. This was 104,000 barrels below the average in the peak week of Aug. 19 when refiners were operating at 75.2 per cent of capacity, working up crude into refined products in haste to avoid any code orders which might limit their ability to reduce crude oil stocks.

Reduction in crude runs were general through the country during the week ended Sept. 2, only two districts reporting small increases. East Coast refiners led with a reduction of 56,000 barrels daily average.

In bulk motor fuel stock reduction the East Coast also led with a cut of 515,000 barrels. Indiana-Illinois refiners reported a reduction of 280,000 barrels and California 246,000 barrels. Texas Gulf refiners were the only ones to report greater inventories, the increase there totaling 394,000 barrels.

Production of cracked gasoline was reduced 23,000 barrels during the week to 468,000 barrels per day.

Refinery gasoline stocks were reduced 401,000 barrels during the week to 28,412,000 barrels. In-transit and bulk terminal stocks fell 666,000 barrels to 19,381,000 barrels. Other motor fuel stocks were unchanged.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Total Motor Fuel		Total Motor Fuel Gas & Fuel Oil		Cracked % of Total Capacity Reporting	Gasoline Production Daily Av. Production (Barrels) Week Ended	
		Sept. 2	Aug. 26	Sept. 2	Aug. 26	Sept. 2	Aug. 26	Sept. 2	Aug. 26		Sept. 2	Aug. 26
East Coast	100.0	460,000	516,000	79.0	88.7	14,516	15,031	9,186	9,077	95.0	81,000	90,000
Appalachian	92.6	78,000	92,000	55.8	65.9	1,976	2,066	830	881	100.0	25,000	26,000
Ind., Ill., Ky.	97.3	340,000	356,000	80.0	83.8	6,676	6,952	5,057	5,091	94.7	90,000	98,000
Okla., Kans., Mo.	82.1	267,000	267,000	70.4	70.4	4,865	5,009	4,056	3,985	91.5	58,000	60,000
Inland Texas	58.7	78,000	82,000	48.4	50.9	1,254	1,301	1,845	1,821	79.1	24,000	21,000
Texas Gulf	98.0	480,000	473,000	96.5	95.1	5,897	5,503	7,170	7,269	97.3	96,000	94,000
La. Gulf	100.0	128,000	131,000	79.0	80.9	1,376	1,421	2,016	1,944	100.0	21,000	26,000
No. La., Ark.	92.6	61,000	57,000	79.7	74.5	238	253	657	619	92.8	10,000	10,000
Rocky Mt.	78.8	33,000	34,000	51.9	53.5	802	885	763	757	92.8	12,000	12,000
Calif.	96.9	459,000	465,000	55.9	56.6	13,943	14,189	*98,425	100,033	100.0	51,000	54,000
Total	92.2	2,384,000	2,473,000	72.1	74.7	51,543	52,610	130,005	131,477	95.1	468,000	491,000

*Decrease from previous week partly due to inventory adjustment.

Complete Seaboard Markets

Prices on this page do not include federal tax levied on some products

Eastern Domestic Markets

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations to jobbers and/or consumers. Florida and S. Carolina inspection tax not included.)

	Prices Sept. 5	Prices Aug. 28	Prices Aug. 21
U. S. MOTOR GASOLINE: Below 65 Octane Number			
New York harbor	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Portland district	6.00 – 6.25	5.75 – 6.00	5.75 – 6.00
Boston district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Providence district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Philadelphia district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Baltimore district	5.75 – 6.00	5.50 – 5.75	5.25 – 5.75
Norfolk district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Charleston district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Savannah district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
Jacksonville district	5.75 – 6.00	5.50 – 5.75	5.50 – 5.75
MOTOR GASOLINE: 65 Octane Number and Above			
New York harbor	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Portland district	6.50	6.25	6.25
Boston district	6.25 – 6.50	6.00	6.00
Providence district	6.25 – 6.50	6.00	6.00
Philadelphia district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Baltimore district	6.00	5.75 – 6.00	5.50 – 6.00
Norfolk district	6.00	5.75 – 6.00	5.75 – 6.00
Charleston district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Savannah district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Jacksonville district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
AVIATION GASOLINE: Below 73 Octane Number			
New York harbor	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Philadelphia	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Baltimore	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Boston	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
73 Octane Number and Above	(Test basis 300° F.; 600 R.P.M.)		
New York harbor	11.00 –12.00	11.00 –12.00	11.00 –12.00
Philadelphia	11.00 –12.00	11.00 –12.00	11.00 –12.00
Baltimore	11.00 –12.00	11.00 –12.00	11.00 –12.00
Boston	11.00 –12.00	11.00 –12.00	11.00 –12.00
WATER WHITE KEROSINE			
New York harbor	5.00	5.00	5.00
Philadelphia district	5.00	5.00	5.00
Baltimore district	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
Norfolk district	5.00	5.00	5.00
Charleston district	5.00	5.00	5.00
Boston district	5.00	5.00	5.00
Savannah district	5.00	5.00	5.00
Jacksonville district	5.00	5.00	5.00
Portland district	5.25	5.25	5.25
Providence district	5.00	5.00	5.00
BURNING OILS:			
New York harbor:			
Furnace oil No. 1	5.00	5.00	5.00
Furnace oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	4.00	4.00	4.00
Industrial oil No. 4	3.50	3.50	3.50
Philadelphia district:			
Furnace oil No. 1	5.00	5.00	5.00
Furnace oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	3.50	3.50	3.50
Industrial oil No. 4	3.50	3.50	3.50
Baltimore district:			
Furnace oil No. 1	5.00	5.00	5.00
Furnace oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	3.50	3.50	3.50
Industrial oil No. 4	3.50	3.50	3.50
Boston district:			
Furnace oil No. 1	5.00	5.00	5.00
Furnace oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	3.75	3.75	3.75
Industrial oil No. 4	3.50	3.50	3.50

	*Bunker Oil Grade C	Prices Sept. 5 Diesel Oil Ships' Bunkers	Gas Oil 28-34 Gravity
New York harbor	$0.95	†$1.75	4.00
Philadelphia district	$0.95	1.75	4.00
Baltimore district	$0.95	1.75	4.00
Norfolk district	$0.95	1.75	...
Charleston district	$0.90	1.75	...
Savannah district	$0.90	†1.75	...
Jacksonville district	$0.90	†1.75	...
Portland district	$1.05	1.85	...
Boston district	$0.95	1.75	...
Providence district	$0.95	1.75	...

*Lighterage 5c per bbl. additional. †At shore plants, 4c per gal.

New York Export Markets

(Prices in cents per gallon in barrels, F. a. s. New York)

CYLINDER OILS (Pennsylvania Products)	Sept. 5	Aug. 28	Aug. 21
Bright stock, No. 8 color	31.00	31.00	31.00
Bright stock, No. 6½ color diluted	30.00	30.00	30.00
Neutral 200 No. 3 color	24.00 –24.50	24.00 –24.50	24.00 –24.50
Neutral 150 No. 3 color	20.25 –20.50	20.25 –20.50	20.25 –20.50
600 Warren E filtered	24.50	24.50	24.50
600 stm. refd. unfiltered	20.75	20.75	20.75
650 stm. refd. unfiltered	23.00	23.00	23.00
600 flash, steam refined	24.00	24.00	24.00
650 flash, steam refined	29.00	29.00	29.00

Wax Market

(Prices in cents per pound. Tests made by A. S. T. M. method with melting points converted into A. M. P. by adding 3° F. Export prices are f.a.s. carload lots. Domestic prices are f.o.b. refineries in New York and New Orleans harbor district, in bags, carload lots, with 0.2c discount allowed for shipment in bulk).

	Prices Sept. 5	
NEW YORK	Domestic	Export
124-126 Yellow Crude scale	3.125– 3.25	3.125– 3.25
122-124 White Crude scale	3.25 – 3.375	3.25 – 3.375
124-126 White Crude scale	3.375– 3.50	3.375– 3.50
123-125 Fully refined	3.70	3.625
125-127 Fully refined	3.80	3.75
128-130 Fully refined	4.05	4.00
130-132 Fully refined	4.30	4.25
133-135 Fully refined	4.75	4.75
135-137 Fully refined	5.05	5.00

	Prices Sept. 5	
NEW ORLEANS	Domestic	Export
124-126 Yellow Crude scale	3.125– 3.25	3.125– 3.25
122-124 White Crude scale	3.25 – 3.375	3.25 – 3.375
124-126 White Crude scale	3.375– 3.50	3.375– 3.50
123-125 Fully refined	3.70	3.625
125-127 Fully refined	3.80	3.75
128-130 Fully refined	4.05	4.00
130-132 Fully refined	4.30	4.25
133-135 Fully refined	4.80	4.75

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions except prices specified to the contrary. Prices cover bulk shipments of 20,000 barrels or more, unless otherwise noted.)

	Sept. 5	Aug. 28	Aug. 21
U. S. MOTOR GASOLINE: For Domestic Shipment			
Below 65 octane number	4.75 – 5.00	4.625– 4.75	4.50 – 4.75
65 octane and above	5.25 – 5.375	5.125– 5.25	5.00 – 5.25
FURNACE OILS			
No. 1 Furnace oil	4.00	4.00	4.00
No. 2 Furnace oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
KEROSINE			
41-43 w.w.	4.25	4.25	4.25
For Export Shipment			
GASOLINE			
U. S. Motor gasoline	**4.50 – 4.625	**4.50 – 4.625	4.00
60-62, 400 e.p. gasoline	4.625	4.50 – 4.625	4.125– 4.25
61-63, 390 e.p. gasoline	4.75	4.625– 4.75	4.25 – 4.375
64-66, 375 e.p. gasoline	4.875 – 5.00	4.625– 4.75	4.375– 4.50
U. S. Motor, cases (cargoes)	$1.25 –$1.35	$1.25 –$1.35	$1.25 –$1.35
64-66, 375 e.p. cases (cargoes)	$1.35 –$1.45	$1.35 –$1.45	$1.35 –$1.45
KEROSINE			
44 water white	4.25	4.25	4.25
41-43 water white	4.125	4.125	4.125
41-43 prime white	4.00	4.00	4.00
W.W., cases (cargoes)	$1.20 –$1.30	$1.20 –$1.30	$1.20 –$1.30
P.W., cases (cargoes)	$1.15 –$1.25	$1.15 –$1.25	$1.15 –$1.25
For Domestic and/or Export Shipment			
GAS and BUNKER OILS			
*26-30 translucent gas oil	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
*30 plus translucent gas oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
Diesel Oil ships' bunkers	$1.60	$1.60	$1.60
Grade C bunker oil, for ships' bunkers, per bbl.	$0.80	$0.80	$0.70
Grade C bunker oil, per bbl. in cargoes	**$0.775–$0.80	**$0.75	$0.65 –$0.70

*Less than ½ of 1% sulphur **Nominal.

MEXICAN CRUDE AND BUNKER OILS (f.o.b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.50	$0.50	$0.46
Grade C for bunkering, taxes paid, per bbl.	$0.80	$0.80	$0.70

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100 ° F. cold test) Tanker, f. o. b. Gulf oil terminals.)

200 vis. No. 3 unfilt. pale	5.25 – 5.75	5.25 – 5.75	4.75 – 5.75
300 vis. No. 3 unfilt. pale	5.875– 6.375	5.875– 6.375	5.375– 6.375
500 vis. No. 3½ unfilt. pale	6.75 – 7.25	6.75 – 7.25	6.25 – 7.25
750 vis. No. 4 unfilt. pale	7.75 – 8.25	7.75 – 8.25	7.25 – 8.25
1200 vis. No. 4 unfilt. pale	8.25 – 8.75	8.25 – 8.75	8.50 – 9.50
200 vis. No. 5-6 red oil	5.00 – 5.50	5.00 – 5.50	4.50 – 5.50
300 vis. No. 5-6 red oil	5.50 – 6.00	5.50 – 6.00	5.00 – 6.00
500 vis. No. 5-6 red oil	6.25 – 6.75	6.25 – 6.75	5.75 – 6.75
750 vis. No. 5-6 red oil	7.25 – 7.75	7.25 – 7.75	6.75 – 7.75
1200 vis. No. 5-6 red oil	7.75 – 8.25	7.75 – 8.25	7.75 – 8.75

Note: Red oil prices shown above cover oils with blue cast; one or two refiners ask 0.5c to 1c per gal. higher for green cast red oils.

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

53-55 U. S. Motor	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
400 e.p. blend 65 Octane and above	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
Gas oil, 30-34 per bbl.	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
Diesel oil, 27 plus, per bbl.	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
Bunker oil, 14-18 per bbl.	$0.725–$0.75	$0.725–$0.75	$0.725–$0.75
Fuel oil, 14-18 per bbl.	$0.625–$0.65	$0.625–$0.65	$0.625–$0.65
38-40, w.w. kero., 150 fire	3.75 – 4.25	3.75 – 4.25	3.75 – 4.25
Cased Goods			
Gasoline, U. S. Motor	$1.45 –$1.60	$1.45 –$1.60	$1.45 –$1.60
Gasoline, 400 e.p. blend	$1.55 –$1.70	$1.55 –$1.70	$1.55 –$1.70
38-40 w.w. kero., 150 fire	$1.10 –$1.20	$1.10 –$1.20	$1.25 –$1.35
Kerosine, prime white	$1.00 –$1.05	$1.00 –$1.05	$1.05 –$1.20

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to U. S. ports, cents per barrel)

	Sept. 5			
	Crude &/or Fuel		Refined Oil &/or Spirits	
	Last Paid	Owners Ask	Last Paid	Owners Ask
Calif-U.K./Continent*	12/6	15/-17/	13/6	15/-17/
Gulf-U.K./Continent*	8/	8/6-9/6	8/	8/6-9/6
Calif-N. Atlantic (not E. of N. Y.)	45c	45-50c	44c	†45-50c
Gulf-N. Atlantic** (not E. of N. Y.)	16c	16-20c	16c	†15-20c

*Continental ports in range between Bordeaux and Hamburg, both inclusive.
**Venezuela loading same rate; Tampico 2 to 3c per bbl. additional.
†Quotations nominal due to owners reluctance to quote for forward position.

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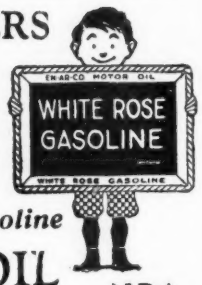

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Gulf Refining Company

General Sales Offices:
PITTSBURGH, PA.

District Sales Offices: New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans

Refiners' & Compounders' Supplies

Following are average market prices for materials used by refiners and compounders effective on the date shown.

	Sept. 5	Aug. 28
Refiners' Supplies		
Soda Ash light 58% bags, cwt.	$1.125-1.38	$1.125-1.38
Silicate of Soda 60 deg. drums ....cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. drums ....cwt.	$0.70-1.00	$0.70-1.00
Sal Soda wks.	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid..cwt.	$2.55	$2.55
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of .....cwt.	$3.10-4.05	$3.10-4.05
Liquid Chlorine, tank cars, wks.....lb.	1.75	1.75
Compounder's Supplies		
Vegetable Oils		
Linseed carloads, spot....lb.	10.30	10.30
Tanks, spot.....	9.70	9.70
Soya Bean, Tank, coast...lb.	8.50	4.70–5.00
Oleic Acid		
Distilled, tanks.....lb.	6.00	6.00
Distilled, bbls.....lb.	6.875	6.75
Saponified, tanks.....lb.	6.25	6.25
Saponified, bbls.....lb.	7.00	7.00
Lard Oils		
Prime Winter Strained....lb.	9.75	9.75
Extra Winter Strained....lb.	8.25	8.25
Extra No. 1.....lb.	7.50	7.50
No. 1.....lb.	7.25	7.25
No. 2.....lb.	7.00	7.00
Tallow oil.....lb.	7.50	7.50
Neatsfoot Oil		
Pure, bbls.....lb.	12.00	12.00
Extra, bbls.....lb.	8.00	8.00
No. 1 bbls.....lb.	7.75	7.75
Cold Pressed.....lb	16.50	16.50
Naval Stores		
Steam distilled turpentine, N. Y.....gal.	48.50	48.50
Steam, distilled turpentine, Savannah .....gal.	43.25	43.25
Gum turpentine, N. Y....gal.	50.00	50.00
Gum turpentine, f.o.b. cars Savannah.....gal.	42.50	42.50
Wood Rosin, N. Y.....bbl.	$4.63	$4.63
Wood Rosin F, Savn'h...bbl.	$3.78	$3.78
Gum Rosin B, N. Y.....bbl.	$5.00	$5.00
Gum Rosin B, f.o.b. cars Savannah.....bbl.	$3.80	$3.80
Rosin oil, pure.....gal.	40–42	40–42
Rosin oil, compounded...gal.	41–43	41–43
Pine Tar		
Kiln burnt.....	$8.00-9.00	$8.00-9.00
Retort .... bbl.	$9.50-10.00	$9.50-10.00
Alcohol		
Denatured Formula 5, per gal., in bbls., car lots.....	35.1	35.1

Gulf Has First "Air" Station

PITTSBURGH—What is claimed as the first "air" service station has been established at Long Island, N. Y. by Gulf Refining Co.

This station consists of a large flat field, suitable for airplanes taking off and landing. It is marked with 12-foot letters "Gulf Air Service Station." Nearby another message appears, giving the price of gasoline, plus the tax, the same practice as at regular service stations. The messages can be seen 2000 feet off the ground, the company says.

The station was prepared under the direction of Capt. Al Williams, noted flyer, who recently was appointed manager of aviation sales for the company.

Crude Oil Prices (in Effect Sept. 4, 1933)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually
(Prices are per barrel of 42 U. S. Gallons at the well: A. P. I. Gravity)

EASTERN FIELDS

(Effective Aug. 30, except Corning Aug. 31, 1933)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$1.92
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$1.87
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.).....†$1.72
Corning Oil in Buckeye Pipe Lines (Ohio)..$0.95
†For Macksburg oil run previous to March 1, 1932, $1.67 effective Aug. 31, 1933.

Posted by Other Companies

Tide Water Pipe Co., Ltd.:
Bradford-Alleghany district (Penna. and N. Y.) (Effective Aug. 30, 1933).....$2.25
*The Pennzoil Co.: Effective Aug. 30, 1933)
Penna. Grade Oil in National Transit Lines*$2.17
Ashland Oil & Transportation Co.: (Effective Aug. 29, 1933):
Somerset Oil in Ashland Lines (Ky.).....†$0.87
*The Pennzoil Co. posts $2.17 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other districts range down to $2.12 per bbl. at wells.
†Somerset price includes 15c premium.

MICHIGAN

(Posted by Pure Oil Co.)

Midland, Midland County (Aug. 17, 1933).$0.70

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

(Effective Aug. 25, 1933)

Lima	$0.95	Illinois	$0.87
Princeton	0.87	West Kentucky	0.82

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Western Ontario
(Effective 7 a.m. Aug. 25, 1933)

Petrolia.....$1.85
Oil Springs.....$1.92

Alberta
Turner Valley
(Effective 7 a.m. Aug. 26, 1933)

40-44.9	$1.51	Naphtha:	
45-49.9	2.08	†Clear	$3.16
50 and above	2.67	†Discolored	2.92

†Clear naphtha: 22 color; 10 lbs. vapor pressure, Anderson method; 90% recovery; end point, 410°. Discolored naphtha: 90% recovery and 10 lbs. vapor pressure.

(Effective May 9, 1933)

Red Coulee.....$0.65

MID-CONTINENT

Prices of Stanolind Crude Oil Purchasing Co.
(Effective 7 a. m., Aug. 25, 1933)
(In Oklahoma, Kansas, North and North Central Texas)

Below 29	$0.48	35-35.9	$0.62
29-29.9	.50	36-36.9	.64
30-30.9	.52	37-37.9	.66
31-31.9	.54	38-38.9	.68
32-32.9	.56	39-39.9	.70
33-33.9	.58	40 and above	.72
34-34.9	.60		

Prices of Carter Oil Co.
(In Oklahoma and Kansas)
(Effective 7 a. m. Aug. 25, 1933)

Below 25	$0.40	33-33.9	$0.58
25-25.9	.42	34-34.9	.60
26-26.9	.44	35-35.9	.62
27-27.9	.46	36-36.9	.64
28-28.9	.48	37-37.9	.66
29-29.9	.50	38-38.9	.68
30-30.9	.52	39-39.9	.70
31-31.9	.54	40 and above	.72
32-32.9	.56		

Prices of Magnolia Petroleum Co.
(Effective 7 a.m. Aug. 25, 1933)

In Oklahoma, same schedule as Carter Oil, which see above, beginning with below 25, at $0.40 and ending with 40 & above, at $0.72.

In posting these prices for Oklahoma, Aug. 25, the Magnolia announced that this schedule in Oklahoma is based on the use of 97% tank table in computing the volume of oil, and that if any seller requests it the Magnolia to use a different tank table, the above prices will be decreased or increased in the proportion that such tank table is more than, or less than, 97%.

In Texas: North and North Central, including Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden; and in Central Texas, including Mexia, Wortham, and Panola county, same gravity and price schedule as Humble in Texas, which see below, beginning with below 29 at $0.38, and ending with 40 & above, at $0.62.

Other companies meeting the Carter schedule in Oklahoma-Kansas, and the Humble schedule in Texas are:

Aug. 25, Shell Petroleum in Oklahoma, Kansas and North Texas.

Aug. 25, The Texas Co. (in Oklahoma and North, North Central and Central Texas), except in Oklahoma, Texas Co's. schedule begins with 28-28.9 at $0.48; and Sinclair-Prairie (in Oklahoma-Kansas and North, North Central and Central Texas).

Aug. 25, Barnsdall Oil Corp. raised Oklahoma, Kansas and North Texas prices 15c, to a range of $0.53 to $0.77.

Aug. 25, Sun Oil Co. raised prices in Oklahoma and North Texas 25c, to a price range of $0.63 to $0.87.

Aug. 25, H. F. Wilcox Oil & Gas met Stanolind in Oklahoma.

Sept. 5, Continental Oil advanced Oklahoma-Kansas 20c, and North Texas 10c, posting a price range of $0.58 to $0.82 for the former, and $0.48 to $0.72 for the latter, with gravity schedule beginning with below 29 and ending with 40 & above. These prices are 10c over major buyers in the respective fields.

Prices of Humble Oil & Refining Co.
(*In North, North Central and Central Texas
(Effective 7 a. m. Aug. 24, 1933)

Below 29	$0.38	35-35.9	.52
29-29.9	.40	36-36.9	.54
30-30.9	.42	37-37.9	.56
31-31.9	.44	38-38.9	.58
32-32.9	.46	39-39.9	.60
33-33.9	.48	40 and above	.62
34-34.9	.50		

*Including North Texas, Ranger, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie and Moran fields.

PANHANDLE TEXAS
Humble Oil & Refining Co.
(Effective 7 a. m. Aug. 24, 1933)

	Gray County	Carson-Hutchinson
Below 35	$0.44	$0.39
35-35.9	0.46	0.41
36-36.9	0.48	0.43
37-37.9	0.50	0.45
38-38.9	0.52	0.47
39-39.9	0.54	0.49
40 & above	0.56	0.51

Aug. 25, above prices met by Magnolia, Sinclair-Prairie and The Texas Co., except that Texas Co.'s schedule begins with 34-34.9. H. F. Wilcox met in Gray county.

EAST TEXAS
*(Effective 7 a. m. Aug. 25, 1933)

Stanolind, Humble, Texas and Magnolia.. $0.60
Sun Oil (Aug. 25)..... 0.75
*Effective Aug. 24 by Humble.

WEST TEXAS and NEW MEXICO
Humble Oil & Refining Co.
(Effective 7 a. m. Aug. 24, 1933)

Pecos, Winkler, Crane, Upton, Crockett, Ector Howard and Glasscock Counties; Lea Co., N. M. $0.40

Above price met Aug. 25 by Texas Co. and Magnolia.

CALIFORNIA CRUDE

Standard Oil Co. of California
(All gravities above those quoted take highest price offered in the field)
Effective 7 A. M., June 26, 1933

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Ventura Avenue (Associated Oil Co.)	Santa Paula (Union Oil Co.)	Orcutt (Union Oil Co.)
14-14.9	$0.55	$0.55	$0.55	$0.55	$0.55	$0.55	....	....	$0.55	$0.55	$0.55	$0.55	$0.55	....	$0.52	$0.52	$0.52	$0.52	$0.52	....	$0.55	....
15-15.9	.55	.55	.58	.58	.55	.58	....	....	.55	.55	.55	.55	.55	....	.52	.52	.52	.52	.52	....	.55	....
16-16.9	.55	.55	.60	.61	.58	.61	....	....	.57	.55	.57	.55	.55	....	.52	.52	.52	.52	.52	....	.55	$0.52
17-17.9	.57	.55	.63	.64	.61	.64	....	....	.60	.59	.60	.55	.57	....	.52	.52	.53	.52	.52	....	.55	.52
18-18.9	.60	.56	.65	.67	.64	.67	....	....	.63	.62	.62	.55	.60	....	.52	.52	.56	.52	.52	....	.55	.52
19-19.9	.63	.60	.68	.70	.67	.69	....	....	.65	.66	.65	.55	.63	....	.52	.54	.59	.52	.52	....	.57	.54
20-20.9	.66	.63	.71	.73	.70	.72	....	....	.68	.69	.68	.55	.65	....	....	.57	.62	.53	.52	....	.60	.57
21-21.9	.69	.67	.73	.77	.73	.75	....	....	.70	.72	.71	.58	.68	$0.60	....	.61	.65	.56	.55	....	.62	.61
22-22.9	.71	.70	.76	.80	.76	.77	....	....	.73	.75	.74	.60	.71	.64	....	.65	.68	.59	.57	.64	.65	.65
23-23.9	.74	.73	.78	.83	.79	.80	$0.68	....	.75	.78	.76	.64	.73	.67	....	.69	.70	.61	.60	.67	.67	.69
24-24.9	.77	.77	.81	.86	.82	.83	.71	....	.78	.82	.79	.67	.76	.70	....	.72	.73	.64	.63	.70	.70	.72
25-25.9	.80	.80	.83	....	.85	.85	.75	F. O. B. Ship	.80	.85	....	.71	.79	.73	....	.76	.76	.67	.66	.73	.72	.76
26-26.9	.82	.83	.86	....	.88	.88	.79	....	.83	.88	....	.75	.82	.76	....	.80	.79	....	....	.75	.75	.80
27-27.9	.85	.87	.88	....	.91	.82	....	....	....	.92	....	....	.84	.80	....	.83	.81	....	....	.78	.77	....
28-28.9	.88	.90	.91	....	.94	.86	....	....	....	.95	....	....	.87	.83	....	.87	.84	....	....	.81	.80	....
29-29.9	.90	.93	.93	....	....	.89	....	....	....	.98	....	....	.90	.86	....	.91	.87	....	....	.83	.83	....
30-30.9	.93	.97	.96	....	....	.93	....	----------				....	.93	.89	....	.95	.89	....	....	.86	.85	....
31-31.9	....	....	....	....	....	.97	....					....	.95	.92	....	.98	....	....	....	....	....	....
32-32.9	....	....	....	....	....	1.00	....	Kettleman Hills				....	.98	.96	....	1.02	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	$0.91	....		$0.76		....	1.01	.99	....	1.06	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	.94	....		.78		....	1.03	1.02	....	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	.97	....		.80		....	....	1.05	....	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	1.00	....		.82		....	....	1.08	....	....	....	....	....	....	....	....
37-37.9	....	....	....	....	....	....	1.03	....		.84		....	....	1.11	....	....	....	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....		.86		....	....	1.14	....	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....		.88		....	....	....	....	....	....	....	....	....	....	....

Subject to Field Gathering Charge of 5c per Bbl.

(Crude Oil Prices continued on next page)

Crude Oil Prices

(In Effect September 4, 1933)

(Continued from preceding page)

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

(Effective 7 a. m. Aug. 24, 1933)

Darst Creek	$0.50	Mirando	$0.50
Salt Flat	0.50	Pettus, Bee Co.	0.65
Saxet	0.55	Tomball	0.75

Humble (continued)

Conroe (Montgomery Co., Tex.)

(Effective 7 a. m. Aug. 24, 1933)

35-35.9	$0.69	38-38.9	$0.75
36-36.9	0.71	39-39.9	0.77
37-37.9	0.73	40 & above	0.79

Above prices met Aug. 25 by The Texas Co. in Darst Creek and Conroe; Texas Co. also posted $0.50 in Duval county, and $0.55 in Saxet-Oreta; Tide Water oil met in Conroe.

Aug. 25, Magnolia posts in Darst Creek and Mirando, $0.50; Luling, $0.45; and Lytton Springs, $0.55; Tomball $0.75; Corsicana heavy, $0.30, June 17.

NORTH LOUISIANA-ARKANSAS

Prices of Standard Oil Co. of Louisiana

(Effective 7 a. m. Aug. 25, 1933)

	Caddo	Homer	Haynesville	Sabine De Soto
Below 29	$0.33	$0.39	$0.35	$0.40
29-29.9	.35	.41	.37	.42
30-30.9	.37	.43	.39	.44
31-31.9	.39	.45	.41	.46
32-32.9	.41	.47	.43	.48
33-33.9	.43	.49	.45	.50
34-34.9	.45	.51	.47	.52
35-35.9	.47	.53	.49	.54
36-36.9	.49	.55	.51	.56
37-37.9	.51	.57	.53	.58
38-38.9	.53	.59	.55	.60
39-39.9	.55	.61	.57	.62
40 and above	.57	.63	.59	.64

	Sarepta Carterville	El Dorado	Miller County, Ark.
Below 29	$0.43	$0.45	$0.29
29-29.9	.45	.47	.31
30-30.9	.47	.49	.33
31-31.9	.49	.51	.35
32-32.9	.51	.53	.37
33-33.9	.53	.55	.39
34-34.9	.55	.57	.41
35-35.9	.57	.59	.43
36-36.9	.59	.61	.45
37-37.9	.61	.63	.47
38-38.9	.63	.65	.49
39-39.9	.65	.67	.51
40 and above	.67	.69	.53

Smackover, Ark.	$0.35
Nevada, Ark.	0.35
Urania, La. (La. Oil Refg. Co., June 20)	0.30

Above prices met as follows:

Aug. 26, by Louisiana Oil Refining Co. in Caddo, Homer, Haynesville, same gravity and price schedule as S. O. La.; also met in Smackover; posted for Cotton Valley, below 29 at $0.38, plus 2c differential to top grade of 40 & above, at $0.62.

Aug. 26, Magnolia Petroleum Co. posted in Pine Island, Haynesville, Bull Bayou, Cotton Valley, La. and El Dorado light and Rainbow, Ark., below 29 at $0.38, plus 2c differential, to top grade of 40 & above, at $0.62; for El Dorado East field and Smackover, $0.40; for Lockport, La., below 20, $0.42, plus 2c differential, to top grade of 34 & above, at $0.72; for Iowa, La. and Cameron-Meadow, in Cameron parish, La., below 20 at $0.32, plus 2c differential, to top grade of 34 and above, at $0.62.

Aug. 25, Gulf Refining Co. posted in Caddo, Homer, Haynesville, Bull Bayou, Crichton, De Soto and El Dorado, below 29 gravity, at $0.38, plus 2c differential, to top grade of 40 & above, at $0.62; also posted Smackover at $0.40.

Aug. 25, The Texas Co. posted in N. La. fields, beginning with 28-28.9 gravity, at $0.38, plus 2c differential, to top grade of 40 & above, at $0.62. It posted Smackover at $0.40.

*GULF COASTAL

Posted by Humble Oil & Refining Co.

(Effective 7 a. m. Aug. 24, 1933)

Below 20	$0.42	27-27.9	$0.58
20-20.9	0.44	28-28.9	0.60
21-21.9	0.46	29-29.9	0.62
22-22.9	0.48	30-30.9	0.64
23-23.9	0.50	31-31.9	0.66
24-24.9	0.52	32-32.9	0.68
25-25.9	0.54	33-33.9	0.70
26-26.9	0.56	34 and above	0.72

Refugio heavy	$0.55

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Orange, Pierce Junction, Rabbs Ridge, Raccoon Bend, Refugio light, Sour Lake, Spindletop, Sugarland and West Columbia.

The Texas Co.

(Effective 7 a. m. Aug. 25, 1933)

Same gravity and price schedule as Humble up to 30-30.9 gravity, which see above; plus these grades:

30-30.9	$0.64	36-36.9	$0.70
31-31.9	0.65	37-37.9	0.71
32-32.9	0.66	38-38.9	0.72
33-33.9	0.67	39-39.9	0.73
34-34.9	0.68	40 and above	0.74
35-35.9	0.69		

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co.

(Effective 7 a. m. Aug. 25, 1933)

Salt Creek and Dutton Creek, Wyo., same schedule as Stanolind posts in Mid-Continent, which see on first crude price page.

Elk Basin, light	$0.82
Grass Creek, light	0.82
Greybull-Torchlight	0.82
Iles, light, Col.	0.60
Iles Heavy	0.54
Hogback, N. M.	0.85
Frannie light	0.51
Frannie heavy	0.40

Posted by Ohio Oil Co.

(Effective 7 a. m. Aug. 25, 1933)

Elk Basin, Wyo.	$0.82
Grass Creek, Light	0.82
Rock Creek	0.66
Big Muddy	0.65
Sunburst, Mont.	1.00

Crude Price Changes

PITTSBURGH—Aug. 30 Joseph Seep Purchasing Agency advanced all grades of Pennsylvania crude 15 cents. New prices are: in Southwest Pennsylvania lines, $1.92; in Eureka lines (West Virginia), $1.87; in Buckeye lines (Macksburg, O.), $1.72 per barrel. Last previous change was a 10 cent advance Aug. 11.

Aug. 31, the Seep Agency advanced Corning, 0.10 cents, to new price of $0.95 per barrel. Last previous change was a 10 cent cut Aug. 4.

OIL CITY—Aug. 30 The Pennzoil Co. advanced lower district Pennsylvania crude 15 cents, to new price of $2.17 per barrel in Cochran, Franklin, Hamilton and Doolittle. In other districts prices range down to $2.12 per barrel.

BRADFORD—Aug. 30 Tide Water Pipe Co., Ltd. advanced Bradford-Alleghany crude 15 cents, to new price of $2.25 per barrel.

ASHLAND, Ky.—Aug. 29 Ashland Oil & Transportation Co. advanced Somerset, Ky. crude 10 cents, to new price of $0.87 per barrel, including the usual 15c premium. Last previous change was an 11 cent cut Aug. 4.

TORONTO—Aug. 26 Imperial Oil Refineries, Ltd. advanced Turner Valley, Alta. crude in amounts ranging from 5 to 13 cents per barrel, and naphthas 17 cents per barrel. New prices are: crude, 40-44.9 gravity, $1.51 (up 5c); 45-49.9, $2.08 (up 9c); and 50 and above, $2.67 (up 13c); naphthas, clear, $3.16; and discolored, $2.92.

PONCA CITY—Sept. 5 Continental Oil Co., which had not taken part in the crude advances beginning Aug. 25, advanced Oklahoma and Kansas crude 20 cents, and North Texas crude 10 cents, to new prices which are 10 cents over those of major buyers in these fields.

Its price schedule in Oklahoma-Kansas begins with $0.58 for below 29 gravity, plus 2 cent differential, to top price of $0.82 for 40 and above. In North Texas, its schedule begins with $0.48 for below 29, plus 2 cent differential, to top price of $0.72 for 40 and above.

Last previous change by the Continental was a 13 cent cut Aug. 2.

TULSA—Sept. 6 Carter Oil Co. will advance Oklahoma-Kansas crude 10 cents, to new price range of $0.50 to $0.82, gravity schedule beginning with below 25 and ending with 40 and above, with 2 cent differential in prices. Last previous change was a 10 cent advance Aug. 25.

This advance meets the prices posted in Oklahoma-Kansas Sept. 5 by Continental Oil Co.

LOS ANGELES, Sept. 6.—Standard Oil Co. of California advanced Signal Hill, Calif., crude of 27-27.9 gravity, 15 cents, to new price of $1.00, and announced that proportionately higher prices will be posted on other gravities and all other California crudes.

PITTSBURGH, Sept. 6.—Joseph Seep Purchasing Agency advanced all Pennsylvania grade crude 10 cents. This follows an advance of 15 cents Aug. 30.

The Tide Water Pipe Co. Ltd. and The Pennzoil Co. also advanced the grades they buy 10 cents.

New prices as posted by the various companies are: Bradford-Allegheny crude in Tide Water lines, $2.35; Pennsylvania grade in National Transit lines, $2.27, ranging down to $2.22 in lower districts; in Southwest Pennsylvania lines, $2.02; in Eureka lines (West Virginia), $1.97; in Buckeye lines (Macksburg, O.), $1.82. Corning was unchanged on Sept. 6.

FINDLAY, O., Sept. 6.—The Ohio Oil Co. advanced all Central States and Rocky Mountain crudes it purchases 10 cents. This follows an advance of a similar amount Aug. 25 in both districts.

New prices are, in Central States: Lima, $1.05; Princeton and Illinois, $0.97; and western Kentucky, $0.92. In Rocky Mountain; Elk Basin and Grass Creek, light, $0.92; Rock Creek, $0.76; Big Muddy, $0.75; and Sunburst, Mont., $1.10 per barrel.

HOUSTON.—Sept. 6 Humble Oil Co. made a blanket advance on crude in all Texas fields where it purchases of from 10 to 15 cents.

The amount of advances in the various fields, and new prices are:

Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie and Moran, 15c advance, to new price range of $0.53 for below 29, to $0.77 for 40 and above, with 2c differential.

East Texas, 15c, to new price of $0.75.

West Texas, including Crane, Upton, Crockett, Ector, Howard, Glasscock, Pecos and Winkler, and Lea

(*Continued on Page* 65)

ADVERTISING PAGES REMOVED

And remember:

THE AVERAGE CAR OWNER USES ONLY ABOUT 8 GALLONS OF MOTOR FUEL A WEEK

tage of the recent improvement in the anti-knock value of regular-priced gasoline to get these high compression rewards to some extent.

But a car designed to the limits of regular-priced gasoline will still, of course, fall short of the competitive superiority of a similar car designed to take full advantage of Ethyl Gasoline.

In building your 1934 car, therefore, you may either increase compression to the permissible limit of present day regular-priced fuel—thus maintaining competitive performance comparison with other cars designed for regular gasoline—or take advantage of Ethyl Gasoline, at a premium of only 2¢ a gallon, to make a greater compression increase and give your car truly outstanding performance.

In addition to permitting performance improvements through increased compression, Ethyl Gasoline insures easy starting, freedom from vapor lock, and safe minimums for gum and sulphur contents. When it is recommended that cars be run on Ethyl Gasoline, car owners are automatically discouraged from using the *lowest price* gasoline and instead are encouraged to use a fuel that is satisfactory in *every* respect, thus insuring continued satisfaction from their cars.

Wherever—and by whatever oil company—it is sold, Ethyl Gasoline is required to meet definite specifications for every needed quality of motor fuel. It is doubly tested before and after Ethyl fluid is added, for anti-knock quality, distillation characteristics, gum, and sulphur contents. After it is placed in retail pumps for sale to the public, inspectors gather samples for retesting to make sure that Ethyl users always get full quality.

Design your 1934 cars for Ethyl Gasoline and thereby get the competitive superiority you want. Recommend that Ethyl always be used and thereby aid every customer to get constant, maximum satisfaction from the car he buys.

Engineers of the Ethyl Gasoline Corporation will be glad to cooperate with you in getting maximum benefit from compression increases. Ethyl Gasoline Corporation, New York City.

New Equipment

A NEW "servistation" or display stand for selling and servicing Hodell tire chains has been developed by the Chain Products Co., Cleveland, manufacturer of these tire chains.

The new servistation, called the Pace-Setter model, is designed to carry Hodell tire chains in continuous lengths, in four standard widths, from which the dealer can fit 90 per cent of all tire sizes, the company says.

This model carries its stock packed in corrugated cartons and the dealer "makes" a pair of tire chains by attaching fasteners and cutting off the proper size tire in the correct width and length.

A foot-operated service tool is part of the equipment, with which all operations in making and servicing tire chains are performed.

* * *

THE William Powell Co., Cincinnati, has issued a 26-page catalogue on its line of valves and fittings for service stations and bulk storage plants. The various designs are illustrated and their parts shown in diagrammatic cross-sections, and their numerous uses indicated.

* * *

LAUNDRY shrinking of uniforms by service station attendants has always been an expensive item of operation. Few of the overalls or clothing of light weight fabrics are exempt from this drawback. According to Sanford L. Cluett, inventor, New York, this bad feature has been eliminated through a patented process of treating of fabrics before they are made up into uniforms.

This process is known as Sanfordizing and consists of a rearrangement of fibres in the cloth to remove the entire shrinkage. As a result uniforms can be made to exact size originally and, it is claimed, they will retain that size indefinitely. Sanfordizing fabrics such as cambrays, denims, gabardines and twills, are now being processed by leading manufacturers and are available in several of the leading uniform houses.

A NEW display package valve for cores and caps is being introduced to the trade by A. Schrader's Sons, Brooklyn. The package consists of a brightly colored, ingeniously designed carton, which may be set up to show a colored panel background, or folded with an easel back rest. The panel size is 5 x 7 inches, which the carton alone is 2¾ x 1¼ x 5 inches.

* * *

THE Aro Equipment Corp., Bryan, O., manufacturer of lubricating equipment, has published a 64-page handsized booklet entitled "The Survival of the Fittest." It pertains to the automotive service industry and tells how to cash in on lubrication service today.

Aside from technical information on lubricating today's motor cars, it explains how a lubrication department can be made the feeder for other service departments, and tells how to select equipment, and how lubrication requirements for various parts are determined.

* * *

THE Phomene Hopper, a continuous foam generator embodying new ideas of design and construction, has been announced by the Pyrene Manufacturing Co., Newark, N. J. The manufacturers claim for their product an unusual simplicity, sturdiness and performance.

It is claimed that the flow of powder is governed automatically by the pressure and amount of water available and that the device operates efficiently with water pressure as low as 35 pounds. An auxiliary water jet in the hopper (an exclusive feature) erodes the powder and flushes it into the main water stream passing through the base. The unit weighs 42 pounds and can be carried in one hand.

* * *

GEORGE H. CORLISS, formerly in sales promotion work with the A. H. Woods Co., Boston, has been made sales and advertising manager with Lewis-Shepard Co., also of Boston. The latter firm is a manufacturer of jacklifts, stackers, etc.

* * *

A NEW type of porcelain enamel service station has been developed by The Austin Co., Cleveland, and the company has issued a four-page illustrated pamphlet on this subject. This pamphlet gives the details of construction and outlines the service offered by the company.

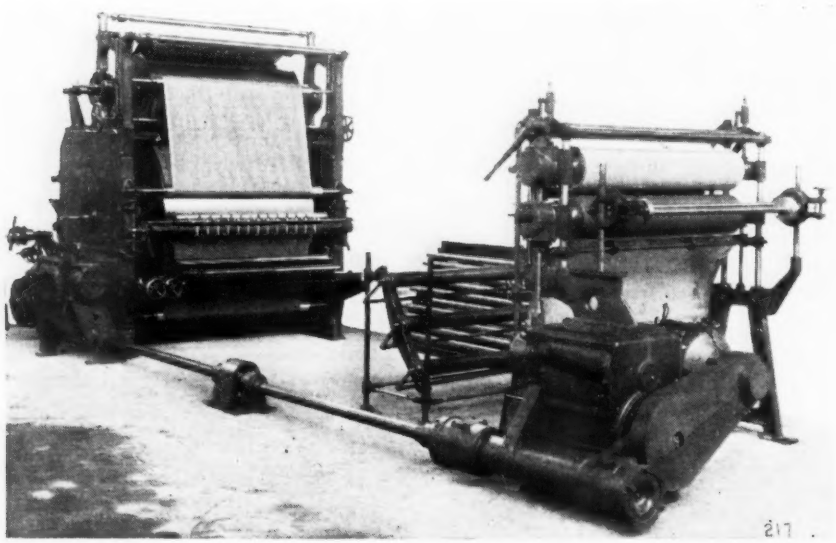
* * *

JOYCE automobile, truck and bus lifts, air and electrically operated, are illustrated and described in a new catalog just off the press by The Joyce-Cridland Co., Dayton, manufacturer. It also describes electric pumping units made by the same company. The catalog is in three colors and contains 38 pages.

* * *

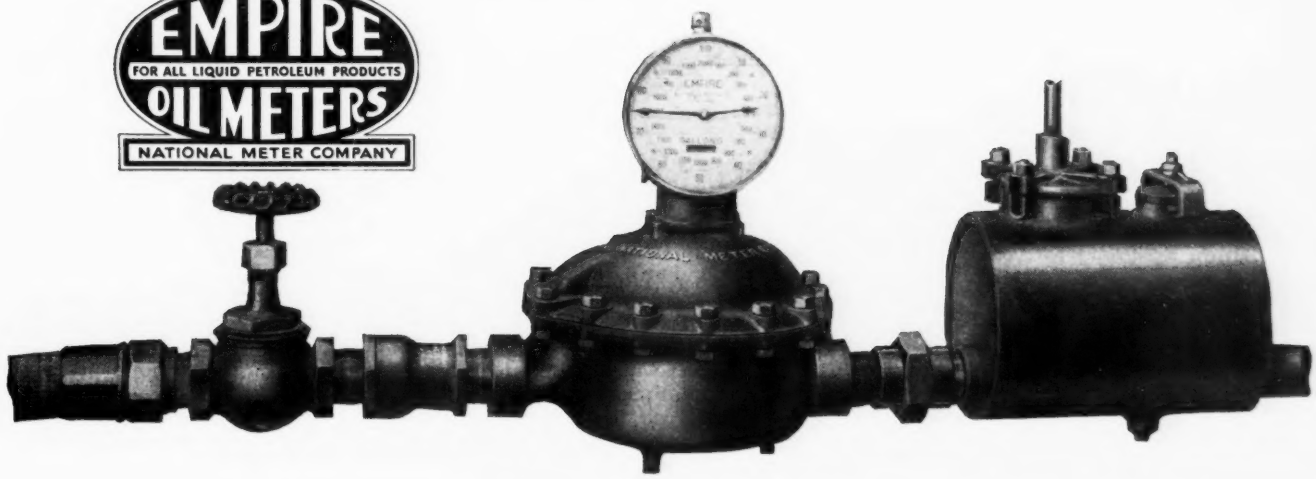
DUAL-LOK joint cast iron pipe and filling and Universal cast iron pipe and fittings is the subject of a 56-page booklet recently issued by The Central Foundry Co., New York.

Particular attention is called to the illustrations and description of Dual-Lok Joint construction, showing its use and adaptability. It is recommended for gas distribution lines, refinery use, filtration plants, air, hot gases and liquors and sewage disposal plants. Lead pouring or calking and all joint making equipment is eliminated through its use, the only tools used in joint making being wrenches. The pipe is made in all sizes, from 2-inch to 30 inches and may also be cement lined.



Machine for Sanfordizing fabrics from which uniforms are made, to prevent shrinkage

EMPIRE
FOR ALL LIQUID PETROLEUM PRODUCTS
OIL METERS
NATIONAL METER COMPANY



Give Your Customers What They Want

Your customers want metered deliveries of fuel oil. They will get such deliveries, sooner or later, either from you or someone else. The installation of truck meters NOW will lead to new business. It will make your meter equipment pay for itself in a very short time. Investigate EMPIRE meter equipment. It is accurate, dependable, and economical.

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4207 First Avenue, Brooklyn, New York
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By Wm. A. Gruse, Ph. D.

"Petroleum and Its Products" is a book which is especially important to the man in refining.

It is a thorough chemical discussion of the properties, refining and utilization of petroleum. Written by Wm. A. Gruse, Ph. D. of the Mellon Institute of Industrial Research, who has spent several years in physical and chemical research in petroleum.

The work is divided into three sections: (1) description of important types of petroleum, its origin, physical properties, constitution from a chemical standpoint, including hydrocarbon and non-hydrocarbon constituents. (2) Distillation, refining and treating by chemical methods, and by physical methods such as absorption and cracking. (3) Under "utilization" the author discusses gasoline and other motor fuels; kerosene, lubrication and petroleum lubricants, wax and petrolatum, fuel oil, petroleum asphalts and miscellaneous by-products.

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NATIONAL PETROLEUM NEWS
1213 West 3rd St. Cleveland, Ohio

OIL INDUSTRY'S CODE

Effective September 2

IGNORANCE of the provisions of the Oil Code, and how it is to be applied by all persons connected with the selling of gasoline, motor oil and other petroleum products . . . will not be accepted by the government for failure to follow its rules.

FREE TO YOU . . . a copy of the complete approved "Oil Industry Code" with the next 52 issues of NATIONAL PETROLEUM NEWS.

PROTECT YOURSELF . . . . in this new era in oil marketing. Send for a copy of the Oil Code AT ONCE. Coming weekly issues of National Petroleum News will keep you posted on interpretations of the rulings and tell you how other oil companies are operating their business under the Code.

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X-2

NATIONAL PETROLEUM NEWS
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Position..... St.-Box.....

Company..... City-State .....

New Refining Patents

Petroleum Coke. U. S. P. 1 916 026, June 27, 1933, application filed Feb. 7, 1930; Kenneth J. Smith and Howard V. Smith, assignors to Skelly Oil Co.

AS A radical departure from the customary shell still methods for coking heavy oils, petroleum coke is now made by flash vaporization in a coking chamber after heating the charging stock in a pipe still. The coking chamber is heat-insulated and the temperature imparted to the oil in the pipe still is such that no heat need be applied to the coking chamber. Steam or other inert gas is introduced during the passage through the pipe still, to increase the velocity of flow through the coils, and to increase the vaporization effect and thus permit a decrease in the necessary operating temperature.

What is Claimed

In treating residuum for optimum coke yield, preheating the residuum and passing it through a coil, injecting a chemically inert hot gas and heating the oil in the coil, passing the mixture without heat loss into an expansion zone and holding it there long enough to utilize its contained heat in causing deposition of an optimum yield of coke, the heat applied in the coil being insufficient to crack the oil but sufficient to vaporize all the volatile portion on release from the coil, the pressure at the coil outlet not exceeding 50 lb. per sq. in.

* * *

Petroleum Bottoms. U. S. P. 1 911 992, May 30, 1933, application filed April 17, 1929; George B. Coubrough, assignor to Lummus Co.

STEAM distillation has not hitherto been considered feasible as a means for recovering lubricants from petroleum bottoms, because the wax-bearing distillates would emulsify with the steam, forming refractory emulsions which could not be profitably separated. By a novel method for preventing emulsification, steam distillation is now made available for this recovery process; the emulsifiable wax-bearing lubricant fraction is displaced from the steam-vapor mixture by a lighter, non-emulsifying fraction. The lighter oil is not used as a reflux, but as a separately introduced fraction, moving counter-currently to displace the heavy wax distillate from its mixture with steam. The heavy distillate is withdrawn as a separate product at an intermediate point in the tower.

What is Claimed

Recovering wax-bearing oils from their liquid mixtures with heavier products, by heating and distilling with steam to produce a vapor mixture of steam and wax-bearing oils, passing this mixture in counter-current to a liquid non-emulsifiable oil, collecting the wax-bearing oil as a liquid, and condensing the vapor mixture of steam and the nonemulsifiable oil.

* * *

Non-Destructive Hydrogenation. U. S. P. 1 914 727, June 20, 1933, application filed May 29, 1929 and in Germany June 7, 1928; Mathias Pier and Friedrich Christmann, assignors to Standard-I. G. Co.

IN CONTRAST with the so-called destructive hydrogenations, in which heavy oils are broken down to yield gasoline fractions, it has been found that catalytic hydrogenation can also be utilized in a non-destructive reaction for the production of heavy oils serving as high grade lubricants. A selected heavy oil, which may be a raw mineral oil or one derived from previous hydrogenation of fuels, is first subjected to a condensation reaction in presence of a metal halide or of a gaseous condensing agent. The product of this treatment is then hydrogenated under non-destructive conditions, i.e. without molecular breakdown, using a sulfur-resisting catalyst. Excellent lubricants are obtained in good yield.

What is Claimed

Making lubricants by subjecting a liquid hydrocarbon product to chemical condensation in presence of an anhydrous metal halide, and the subjecting the product to non-destructive hydrogen at 250-460°C. and under pressures between 5 and 1000 atm., using a catalyst not poisoned by sulfur.

* * *

Catalytic Cracking. U. S. P. 1 915 206, June 20, 1933, application filed July 24, 1931; Donald R. Stevens and Julius R. Adams, assignors to Gulf Refining Co.

IN THE usual method of cracking heavy oils with the aid of aluminum chloride or a like catalyst, the light distillate is removed as formed and the system is given no opportunity to reach an equilibrium. It has now been found that the ideal reaction is much more nearly approached if the entire system is heated under pressure for a sufficient time (about 15 minutes) for the reaction to come to equilibrium. The gasoline yield is improved, the catalyst is more efficiently utilized, coking is minimized, formation of fixed gas is lessened.

What is Claimed

In cracking heavy oils with the aid of aluminum chloride, mixing the oil with 2-3% of aluminum chloride and heating to about 400°C. in absence of added hydrogen, for a period of 6 to 15 minutes under a pressure which minimizes vaporization, generally 1000-3000 lb. pressure, and then distilling the treated mixture.

* * *

Vapor Phase Cracking. U. S. P. 1 914 914, June 20, 1933, application filed April 23, 1929; Earle W. Gard, Blair G. Aldridge and Philip Subkow, assignors to Union Oil Co. of California.

IN SUCCESSFUL vapor phase cracking the vapor must be dry, both for thermal economy and to prevent coking; the heating must be uniform; and high turbulency is required for efficient heat conduction throughout the vapor. But it is also important that the heating of the oil should be done in the liquid phase, for thermal efficiency. It has now been found that all these conditions are achieved by heating the oil under very high pressure to such a heat that its critical temperature is reached, and then flash-vaporizing it into a system having no back pressure other than the frictional resistance of the tube walls. Thus a perfectly dry vapor is formed in such turbulent flow as to scour out from the tubes any evolved carbon, and the vapor is evenly and efficiently cracked.

What is Claimed

Heating oil in a flowing stream under high back pressure sufficient to maintain the liquid phase up to the critical temperature, completely vaporizing the oil under the high pressure and then releasing the back pressure on the flowing stream and expanding the oil vapors through a heated zone to effect vapor phase cracking.

* * *

Dephlegmator. U. S. P. 1 915 746, June 27, 1933, application filed April 20, 1931 and in Great Britain May 19, 1930; Harold Moore, assignor to Jenkins Petroleum Process Co.

INSTEAD of the usual expedient of baffle plates to effect intimate vapor-liquid contact by forcing the liquid in a tortuous path over the trays of a bubble tower, a system is now provided in which the liquid makes one circuit around the center of each of a series of trays or baffles. The liquid is made to flow in a wide, thin stream, and vapor is bubbled through it at points arranged both radially and circumferentially over the tray surface. The new arrangement has the advantage of providing uniform temperature gradient from any portion of one tray to the corresponding portions of the trays below it, while at the same time promoting complete and intimate vapor-liquid contact.

What is Claimed

In a bubble tower, a circular bubble tray with concentric inlet pipes having caps for passage of oil vapor, a central vapor inlet in the tray, a bubble cap over said inlet, and arms radially extending from this cap to engage with lateral fins extending from the bubble caps of the inner circle of inlet pipes.

Oil Code Service from Washington

Attention! Oil Marketing Executives

TO apply, in your own operations, the oil industry's N.R.A. Code—which becomes *effective Sept. 2*—YOU will need quick, accurate, daily service on—

1—Official changes in the oil code.

2—Interpretations of present rules in the code.

3—Official announcements from N.R.A. headquarters and other government bureaus affecting oil companies' operations under the Code.

4—Information coming from the Planning and Coordination Committee, which will administer the code, on behalf of the oil industry.

Starting Sept. 2 "word" from Washington will govern the practices of the oil industry. Delay in having the official announcements from the agencies which have to do with the Oil Code may be costly.

Platt's Oilgram long the accepted price service of the oil industry, now adds this "service from Washington." It will bring you quickly, accurately, the information which will be necessary in carrying on an oil company's operations in any branch of the industry.

This Washington service is in addition to the comprehensive daily price information on petroleum markets over the country which the Oilgram regularly offers.

To acquaint you with this new Oilgram service, a special rate of three months for $25 is offered.

Act Now. The oil industry starts functioning under the Oil Code Sept. 2. Use the coupon below and MAKE SURE you have—starting Sept. 2—on your own desk, *daily* the information necessary to apply the oil code.

Special Introductory Offer

PLATT'S OILGRAM Date.....

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Send *daily* PLATT'S OILGRAM with the new Oil Code service from Washington. Enclosed is check for $25 to cover special introductory offer of three months.

NAME.....

Authorized by..... St.-Box.....

Position..... City-State.....

Short Talks on Advertising

VII.—Can Advertising Hasten Prosperity?

Prepared by the
Bureau of Research and Education
ADVERTISING FEDERATION OF AMERICA

SINCE the days of the World War, no single problem has demanded a greater concentration of national thought than has now been trained upon our universal objective—economic recovery. After nearly four years of adversity, it has been made painfully clear to all of us that we are not going to be rescued from our predicament by any automatic device. Our situation is unlike any in history. The natural curative forces on which we have relied so long are not working freely.

It is human nature when in trouble to look for help from higher authority. In three years, the popular wish has become an imperative demand that the United States government banish the depression. We not only want someone to lead us out of the wilderness—we want the trees cut down. Innumerable plans have been proposed, outlining how the government should restore prosperity.

Prosperity is merely a condition in which everyone acts normally, confidently, and ambitiously. We want our government to make us act that way, although no government in all history has ever been able to do that for its people. When our system has broken down, there are a number of reconstruction measures which must be taken by central authority. Much of this has been done and more is being accomplished with stimulating speed and courage.

But actually starting the hum of the wheels of industry is up to us as individuals—business men and consumers. Business is not a huge unified machine to be started and controlled from the central power house. It is made up of many thousands of units, each controlled by human beings subject to the fears and fancies of the moment. Each of these units depends upon the whims and emotions of a multitude of consumers.

Before us we have the picture of a partially reconstructed framework, the background for a normally functioning business structure. The individual machines in this structure must be set in motion and the only way that can be done is through increased sales of their products. Many point to the necessity for greater purchasing power of consumers. But purchasing power can be increased only by greater business activity. There is no way to expand business activity except through greater use of such purchasing power as now exists.

Millions of people possess unused purchasing power which must begin moving through the channels of trade before conditions will improve. These millions need many things which they will buy when they have the right combination of desire and confidence.

Our most pressing need is to stimulate buying desire on the part of those who can afford to increase their purchases. The greatest known creator of buying desire is advertising. In good years and bad, there is nothing like the written and spoken words of well-planned advertising to help people make up their minds to buy the things they need. In this way, advertising is accomplishing its assigned task at that crucial point from which permanent recovery must proceed.

The advertisers of honest products are thus performing a most important public service. Their advertising messages are the vitalizers of business in its persevering climb to prosperity.

This is one of a series of fifteen articles prepared by the Bureau of Research and Education of the Advertising Federation of America, as a part of its program to promote a better understanding of advertising, renew the confidence of business men in its use, and increase its effectiveness as a marketing force.

ADVERTISING FEDERATION OF AMERICA
330 W. 42nd St., New York, N. Y.

On The Lazy Bench

Ye Ed's System

"Can you type?"
"Well, I use the Columbus system."
"What's that?"
"I discover a key then land on it."

—The Pure Oil News,
The Pure Oil Company.

* * *

Following Instructions

A school teacher instructing her class in composition said: "Now children, don't attempt any flights of fancy. Don't try to imitate the things you have heard, but just be yourselves and write what is really in you."

As a result of this advice, one youngster turned in the following composition:

"I ain't goin' to attempt no flite of fancy; I'm just goin' to write what's in me, and I got a hart, a liver, two lungs, and some other things like that; then I got a stummick, an' it's got in it a pickle, a piece of pie, two sticks of peppermint candy and my dinner."

—The Pure Oil News,
The Pure Oil Company.

* * *

What Bobby Sang

Mother: "Bobby, did you do anything besides eat at the Sunday school picnic?"

Bobby: "Yes Mummie, we sang a hymn called 'We Can Sing, Full Though We Be'."

Inquiries revealed that the title of the hymn was, "Weak and Sinful Though we Be."

—The National Dixie Booster,
Dixie Distributors.

* * *

Lawyer—And are you ready to swear to the remarkable state of facts which you have outlined to me?

Client—Certainly, I'll swear to it—but I wouldn't advise you to bet any money on it.

—"The Oil Can,"
Independent Petroleum Marketers.

* * *

They were skating in the rink Christmas Eve, and Liza fell down, flopped over and came right up again in front of Rastus with remarkable agility.

"Did yo' see how quick ah recover mah equilib'ium, Rastus?"

"Golly, yaas—almos' before ah noticed it was uncovered!"

—Ohio Petroleum Marketer,
Ohio Petroleum Marketers Assoc.

* * *

Family Troubles

Mrs. Burton K. Wheeler, wife of the senior senator from Montana, tells a good story about a family mourning for a departed father.

There was the usual argument about the division of the estate when one of the sons, wearied by the struggle, said:

"Sometimes I wish father hadn't died."

—The National Dixie Booster,
Dixie Distributors.

Power-Prover

(*Continued from page 36*)

a specially developed Neon Timing Lamp. This lamp, connected in series, with the secondary ignition system of the cylinder which was used in timing, withstands the high voltage encountered, and flashes only at the instant of ignition of that cylinder. Hence, it proves stroboscopic or slow motion effect with which to study marks placed on the flywheel and case, or the fan-belt pulley and radiator, at correct stationary timing.

If the timing is found to be faulty at high speeds, correction by adjustment or repair of faulty parts is made.

The coil is tested through a variable spark gap connected between the coil and the distributor. If the current is found ample, to jump this supplementary gap the coil may be assumed to be sound.

The condenser is checked for its ability to hold charges, with a device which indicates ground shorts or defective insulation, through ignition of an electric bulb.

When the current supply, the coil, and condenser have been checked, it is necessary to know that no current is being lost through secondary wiring. This is checked through a Neon pencil which, when traced along a wire, will flash brilliantly when broken or defective insulation is encountered. Such wiring is then replaced.

At this point, when all adjustments to ignition have been made precisely, a second determination of combustion efficiency is made. If it is found that correct efficiency has not been obtained, the carburetor is then adjusted.

Under this systematic procedure, it has been interesting to note that a great majority of carburetors need little manipulation, and especially interesting in view of the fact that, under ordinary methods, the carburetor is usually subjected to adjustment before the other factors incidental to combustion have been corrected.

In adjusting the carburetor, the operator is generally aided by constant references to his analyzer dial. If the needle moves away from the desired efficiency, he is making the wrong adjustments. If it moves toward the desired efficiency, he is making the correct adjustments.

When the motor has been brought to proper efficiency, its owner or operator is asked to give it a brief road test to make sure of its starting, power, pick-up, and performance. The instances where readjustments are necessary are remarkably rare.

The Power Prover indicator has proved to be of impressive psychological value upon the mechanic and the motorist; the former dare not release a motor even though it may sound satisfactory, knowing that its efficiency is incorrect. The motorist, who knows little about the intricacies of his engine or adjustments, quickly learns that he need only watch the analyzer dial to know whether he is getting improvements or not.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

EXPERIENCED MANAGER AND ASSISTANT MANAGER refinery sales, retail marketing and lubricating oil departments, desires position as manager or assistant in either department. Familiar with trade and marketing conditions in Kansas. In bulk station business for self at present. Address Box 24.

SALES PROMOTER, experienced in negotiating franchises with distributors and jobbers in the East; seeks new connection. Address Box 216, Hollidaysburg, Penna.

Equipment Wanted

BOWSER electric remote control pumps wanted. ALSO 60-gallon lube tanks with 1-gallon pumps. State price and quantity in first letter. Address Box 25.

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GASOLINE OIL
Standard Methods Employed
Octane Ratings by A. S. T. M. CFR Unit
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JOBBER-PARTNER WANTED

Large successful oil jobber, Kansas City, wants partner for general manager. Tremendous possibilities. Should invest approximately $10,000 as evidence of responsibility.

This is a proposition that will stand thorough investigation. The only purpose of sale of an interest is to secure services of a competent executive.

Address Box 22

Business Opportunities

JOBBING COMPANY IN INDIA DESIRES AMERICAN CONNECTION

Firms interested in immediate export of Lubricating Oils in non-returnable steel barrels; also Petrol, Kerosene and Fuel Oil in bulk at a later date; please send their C.I.F. Indian Ports lowest quotations and samples.

Advertisers are already in the trade for over a decade and are very shortly putting up their own bulk installations at Main Indian Ports.

Write Box 26, care National Petroleum News.

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."
"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.
"Position Wanted"—5 cents a word. Minimum charge $1.00.
Advertisements set in special type or with border—$4.00 per column inch.
Copy must reach us not later than Friday preceding date of issue.
All advertisements carried on this page are payable in advance.

Crude Price Changes

(*Continued from page 56*)

county, N. M., 10c, to new price of $0.50.

Texas Panhandle, 10 cents, to new price range in Gray county, of $0.54 for below 35, to $0.66 for 40 and above, with 2c differential; in Carson-Hutchinson counties, new price range of $0.49 to $0.61, same gravity schedule as Gray county.

Conroe, Tex. (Montgomery county), 15 cents, to new price range of $0.84 for 35-35.9, to $0.94 for 40 and above, with 2c differential.

Gulf Coast, up 12 cents, to new price range of $0.54 to $0.84, with gravity schedule beginning with below 20 and ending with 34 and above, with 2c differential.

Other south, southwest and Gulf Coastal grades not included in above fields, up 10 cents to 15 cents. These are: Saxet and Refugio heavy, each up 10 cents to new price of $0.65; Mirando, up 10 cents, to $0.60; Pettus up 15 cents, to $0.80; Salt Flat and Darst Creek, up 12 cents, both to $0.62; and Tomball, up 15 cents, to $0.90.

(More price changes on page 48)

Transactions in Oil Stocks on New York Stock Exchange

1932 High	1932 Low	1933 High	1933 Low	Listed Shares	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
22¾	12	47	18½	922,070	N.P.	Amerada Corp.	50cQ	July 31, 33	79,700	*47	40½	46¾	+ 4⅝
16½	6½	34¾	6¾	2,290,412	$25	Associated Oil Co.	....	Dec. 31, 32	270	30	26	30	+ 4
21⅞	8⅝	31⅞	12⅝	2,696,652	25	Atlantic Refining Co.	25cQ	June 15, 33	42,800	30⅝	28	30½	+ ½
7	3⅜	11	3	2,258,779	5	Barnsdall Corp.	....	May 11, 31	105,600	10¾	9⅛	10¾	+ 1⅜
12½	9	12	9	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	700	10⅝	10	10⅝	+ ⅛
9	4	15¾	5	14,218,835	N.P.	Consolidated Oil Corp.	....	.....	134,400	14⅞	12½	14⅞	+ 1¾
101	79	105	95½	132,771	$100	do pfd.	$2Q	Aug. 15, 33	200	104⅝	104½	104⅝	+ ⅝
9⅜	3⅝	19½	4⅞	4,722,652	N.P.	Continental Oil Co.	....	.....	99,100	19⅜	16¼	19⅜	+ 1⅞
15½	4¾	27	4⅝	413,333	$10	General Asphalt Co.	....	June 15, 32	17,300	23¼	20¾	22⅞	+ ⅜
28¼	8¾	38	8¼	95,841	$100	Houston Oil Co.	....	.....	16,000	32⅞	27½	32⅞	+ 3
5⅝	1⅝	7⅝	1⅝	678,234	25	do new.	....	.....	9,600	6⅝	5¾	6⅝	+ ⅝
2¾	1	4½	1⅛	1,207,132	10	Indian Refining Co.	....	Dec. 15, 20	300	3¼	3	3¼	+ ⅛
2¼	½	4	⅝	1,309,060	N.P.	Louisiana Oil Ref'g. Corp.	....	.....	900	3	2⅜	3	+ ½
18	3	29	3½	40,000	$100	do pfd.	....	May 16, 32	30	16	16	16	— 8
1½	⅝	4	½	330,000	N.P.	Maracaibo Oil Exploration Co.	....	.....	1,800	3½	2⅜	3	+ ⅝
65	50	72	55	449,083	$100	Mexican Petroleum Co.	....	Apr. 20, 31	20	72	71	72	+ 1
8⅞	3¾	16	3¾	1,857,912	N.P.	Mid-Continent Petroleum Corp.	....	Feb. 16, 31	1,400	15	13½	13⅞	— ⅝
11	5	17⅝	4¾	6,648,052	N.P.	Ohio Oil Co.	....	Dec. 15, 32	70,400	16¾	13½	16¾	+ 2⅛
14	6	14	12	4,699,885	$5	Pan Amer. Pet. & Transp. Co.	....	Mar. 15, 33	300	9⅞	9⅞	9⅞	0
1¼	¼	4¼	⅝	199,370	N.P.	Panhandle Prod. & Ref'g. Co.	....	.....	1,100	2¼	1⅞	2¼	+ ¼
14	3½	20	5¾	17,994	$100	do pfd.	....	July 2, 23	30	15	15	15	+ 4⅜
7⅛	3	15	4⅝	2,153,444	5	Petroleum Corp. of America	....	June 1, 31	14,900	13⅞	11¾	13⅞	+ 1⅜
8½	2	17⅞	4¾	4,439,450	N.P.	Phillips Petroleum Co.	....	Jan. 2, 31	66,400	17¼	15	17¼	+ 2
¾	¼	1⅞	¼	1,184,817	$25	Pierce Oil Corp.	....	.....	5,900	1⅛	1	1⅛	+ ⅛
9	3½	13⅞	3⅞	150,000	100	do pfd.	....	Feb. 1, 22	600	11⅛	10	11	+ 1
1⅝	½	2¾	⅝	2,500,000	N.P.	Pierce Petroleum Corp.	....	Feb. 16, 31	5,200	2⅛	1⅞	2⅛	+ ⅜
12½	8½	17⅝	6¾	1,050,000	$5	Plymouth Oil.	....	Mar. 31, 33	38,800	16⅞	13¾	16¾	+ 1½
9½	3½	15½	5⅝	2,441,432	25	Prairie Oil & Gas Co.	....	Mar. 31, 31	.....	....	....	....	....
12¼	5½	22	7	4,050,000	25	Prairie Pipe Line Co.	....	July 1, 31	.....	....	....	....	....
1⅜	⅛	2⅞	¼	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 23	8,500	1⅞	1¼	1⅞	+ ⅝
9¾	1	13	3	28,186	50	do pfd.	....	May 4, 25	1,180	9½	7⅛	9½	+ 1⅝
6½	2⅞	11⅞	2½	3,038,370	N.P.	Pure Oil Co.	....	Sept. 1, 30	67,000	11¾	9⅜	11¾	+ 1¾
80	50	65⅞	30	130,000	$100	do 8% pfd.	....	Apr. 1, 33	700	58	54	57½	+ 1½
23¾	12⅛	36⅜	17⅝	425,342	$13.40	Royal Dutch Co. (N. Y. shares)	$1.07½	Aug. 14, 33	2,900	36	33¼	36	+ 3
20⅜	6⅜	33⅞	15	1,244,383	N.P.	Seaboard Oil Co. of Del.	15cQ	June 15, 33	21,300	31⅜	26½	31	+ 3⅜
16⅜	8	24⅜	11¼	55,853	£2	Shell Transport & Trading Co.	67c	July 28, 33	.....	....	....	....	....
8¾	2½	11¾	4	13,070,625	N.P.	Shell Union Oil Corp.	....	June 30, 30	23,400	9¾	8½	9⅝	+ ⅜
65¼	18	61	28½	400,000	$100	do pfd.	....	July 1, 31	200	57	55¾	55¾	+ ¾
7½	3¼	12⅜	4⅞	500,000	10	Simms Petroleum Co.	....	Jan. 16, 33	3,200	11½	9⅜	11½	+ 1⅜
5¾	2½	9⅞	3	1,100,069	25	Skelly Oil Co.	....	Dec. 15, 30	5,000	9	8	9	+ 1
33½	12	57½	22	120,000	100	do pfd.	....	May 1, 31	300	55	55	55	— ⅝
12¼	5¼	15½	6	31,701,348	25	Socony Vacuum Corp.	....	Mar. 15, 33	86,000	13¾	12⅛	13¾	+ ¾
100½	81	110¼	92½	764,925	100	S. O. Export Corp. pfd.	$2.50S.A.	June 30, 33	200	102	101⅜	101⅜	— ⅝
31⅞	15⅛	41¼	19½	13,102,900	N.P.	S. O. California	25cQ	June 15, 33	46,700	*41¼	37¾	41	+ 2¾
16½	7	26½	12¾	320,000	$10	S. O. Kansas	....	Mar. 16, 31	2,400	26	22¾	26	+ 4⅛
37⅝	19⅞	41⅜	22¾	25,740,965	25	S. O. New Jersey	50cS.A.	June 15, 33	67,400	*41⅜	38⅞	41⅜	+ 1⅝
39⅞	24¾	50	35	1,590,406	N.P.	Sun Oil Co.	25cQ	June 15, 33	400	47	43	47	+ 2¼
92	68	103	89	100,000	$100	do pfd.	$1.50Q	June 1, 33	30	101¾	100¼	101¾	— 1¼
2	¼	4½	¾	912,479	N.P.	Superior Oil Corp.	....	.....	14,200	3¼	2⅝	3¼	+ ½
18¼	9¼	28⅝	10¾	9,851,236	$25	The Texas Corp.	25cQ	July 1, 33	38,400	27¾	24⅜	27⅝	+ 2⅛
4	1½	6½	1⅝	930,570	10	Texas Pacific Coal & Oil Co.	....	Dec. 31, 29	8,600	5	4⅜	5	+ ¾
5⅝	2	10¾	3⅛	5,998,919	N.P.	Tide Water Associated Oil Co.	....	Feb. 16, 31	63,700	10¼	9¼	10¼	+ ⅝
60	20	65	23½	695,503	$100	do pfd.	....	Jan. 3, 33	900	53	49	53	+ 2½
10	5	18	9¾	2,191,823	N.P.	Tide Water Oil Co.	....	Dec. 31, 32	100	*18	18	18	+ 2
62	30	68	45	199,446	$100	do pfd.	$1.25Q	Aug. 15, 33	200	65	65	65	— ½
15⅝	8	23⅝	8½	4,386,070	25	Union Oil of California	25cQ	Aug. 10, 33	14,800	22	19¾	22	+ 1½
19¼	11⅛	22¾	10½	1,200,000	N.P.	Union Tank Car Co.	30cQ	June 1, 33	2,700	20⅜	18½	18½	— 1⅜
2¼	½	4⅞	⅝	759,538	N.P.	Warner Quinlan Co.	....	July 3, 30	3,000	3	2½	3	+ ½
8¼	2¾	5½	2	431,443	$5	H. F. Wilcox Oil & Gas Co.	....	May 10, 28	2,300	3⅞	3¼	3⅞	+ ½

*New high. †New low. ††Also extra—Seaboard 10c.

Standard Oil Stocks on New York Curb Market

1932 High	1932 Low	1933 High	1933 Low	Shares Issued	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
7	6	13	6	40,000	$25	Borne Scrymser Co.	....	Oct. 15, 30	.....	....	....	....	....
35	17½	39¾	25	200,000	50	Buckeye Pipe Line Co.	75cQ	June 15, 33	.....	....	....	....	....
90	53	115	71	120,000	25	Chesebrough Mfg. Co.	††$1Q	June 29, 33	.....	....	....	....	....
3⅛	1¼	8⅝	2¼	5,977,873	N.P.	Creole Petroleum Co.	....	.....	6,300	8½	7½	8¼	— ⅛
35	18	41¾	20	50,000	$100	Eureka Pipe Line Co.	$1Q	Aug. 1, 33	150	31¾	31¼	31¾	0
55	35⅜	88	40	2,974,645	25	Humble Oil & Refg. Co.	50cQ	July 1, 33	5,700	86	80¼	86	+ 4½
10⅞	6¼	15¼	6½	26,742,792	N.P.	Imperial Oil Corp. coup.	12½cQ	June 1, 33	4,600	14⅛	13½	14⅛	+ ½
10⅛	6½	15	6½	.....	N.P.	do registered	12½cQ	June 1, 33	200	13½	13⅜	13½	— ½
7½	2⅝	8	3⅛	300,000	$10	Indiana Pipe Line Co.	15cS.A.	May 15, 33	.....	....	....	....	....
12¼	8	19⅞	8⅞	14,247,088	N.P.	International Petroleum Co.	25cQ	June 15, 33	24,400	19	17⅝	19⅛	+ 1⅜
10⅓	6	10	5½	513,000	$12.50	National Transit Co.	....	Dec. 15, 32	100	8¼	8¼	8¼	0
6	2¼	4⅞	3	100,000	5	New York Transit Co.	15c S.A.	Apr. 15, 33	.....	....	....	....	....
5½	3⅛	6½	4¼	120,000	10	Northern Pipe Line Co.	25cS.A.	July 1, 33	100	5	5	5	0
79	60	87	70¼	580,796	100	Ohio Oil Co. pfd.	$1.50Q	June 15, 33	.....	....	....	....	....
10	1¾	4	1¼	400,000	25	Penn Mex. Fuel Co.	....	May 25, 32	.....	....	....	....	....
10	3⅜	6	2¾	100,000	10	Southern Pipe Line Co.	....	Mar. 1, 33	.....	....	....	....	....
16⅓	9⅜	22⅛	11	1,200,000	25	South Penn Oil Co.	25cQ	June 30, 33	3,600	17⅞	16⅜	17⅞	+ 1⅜
37	27	43	24½	35,000	50	South West Pa. Pipe Lines.	$1Q	Apr. 1, 33	.....	....	....	....	....
25⅛	13⅛	33⅞	17	15,941,894	25	S. O. Indiana.	25cQ	June 15, 33	24,100	32⅜	29⅜	32¼	+ 1¾
15⅞	8⅞	19¼	8¾	2,606,983	10	S. O. Kentucky.	25cQ	June 15, 33	2,900	17¼	16⅜	17¼	+ ⅝
19	10¼	20½	11	190,822	25	S. O. Nebraska.	25cQ	June 20, 33	500	17	17	17	— ½
30⅛	15½	41	15⅛	752,465	25	S. O. Ohio.	....	Jan. 3, 33	500	34	32	34	+ 2
87	75	88	60	120,000	100	do 5% pfd.	$1.25Q	July 15, 33	20	80	80	80	0
2	1⅜	3	1	34,158	25	Swan Finch Oil Corp.	....	Jan. 15, 32	100	2⅛	2⅛	2⅛	— ⅝

*New high. †New low. ††Also extra—Chesebrough 50c.

General, Westinghouse, Go NRA

CLEVELAND — The General Electric Co., Schenectady, and Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., were among the first to announce their compliance with the code accepted by the electrical manufacturing industry which went into effect Aug. 15.

Gerard Swope, president of the General, said that his company had anticipated the code by a week and made its changes in hours and wages effective Aug. 7. It had put to work 2000 additional employes, decreased shop hours to 36 and office hours to 40, raised wages to reach the minimum, and made equitable adjustments in other salaries.

F. A. Merrick, president of Westinghouse, announced that all works and offices of the company and its subsidiaries will operate under the provisions of the National Recovery Act, and as set forth in the code of the electrical industry.

Oil and Royalty Stocks on New York Curb

1932 High	1932 Low	1933 High	1933 Low	Par Value	Company	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
¾	¼	2⅜	⅛	N.P.	American Maracaibo..	14,400	1⅜	1⅜	1¾	+ ¼
3¾	¾	5½	1⅛	N.P.	Arkansas Nat. Gas....	1,000	2⅜	2⅛	2⅛	— ¼
3⅜	½	5	1	N.P.	do A.....	2,600	2	1⅞	2	+ ⅛
5⅜	1½	4⅞	2	$10	do pfd.....	300	2¾	2¾	2¾	0
9¾	6¾	14	6⅛	N.P.	British Amer. Oil coup.					
¾	¼	7¾	¼	$¼	Carib Syndicate.....	34,700	6¾	5	6¾	+ 1½
6⅞	1¼	6¼	2	N.P.	Cities Service.....	44,900	3⅛	3	3⅛	0
53⅜	10	30	10½	$100	do pfd.....	800	16¼	15¾	16	— ½
4½	1	3¾	1	10	do pref. B.....					
45	9	25	5	100	do pref. BB.....	20	13	12	12	— 2
1¼	¼	4	¼	N.P.	Colon Oil Corp.....	4,800	3⅛	2½	3	+ ⅜
2⅜	½	2½	⅜	N.P.	Columbia Oil & Gas vtc.	1,300	1½	1¼	1½	+ ⅛
..	..	2⅞	1	$1	Consolidated Royalty..					
2⅞	¼	7	1⅛	N.P.	Cosden Oil.....	1,500	4	3½	4	+ ⅜
8	1⅞	13½	2½	$100	do pfd.....					
⅜	⅛	1¾	⅜	N.P.	Crown Central Pet....	2,200	1¼	⅞	1¼	+ ¼
7⅛	1⅜	7¼	2⅛	N.P.	Darby Petroleum.....	400	5⅜	5	5⅜	+ ⅜
3	1	2¾	⅞	N.P.	Derby Oil & Refg.....					
24½	10½	25¼	25	N.P.	do pfd.....					
44¾	23	62	24	$25	Gulf Oil Corp.....	6,400	60	55	60	+ 3⅞
5	¾	7	1¼	N.P.	Indian Ter. Illg. Oil A	100	4	4	4	0
4½	1½	6½	1¼	N.P.	do B.....					
¼	⅛	¼	⅛	$5	Intercontinental Pet...					
1	⅜	2	⅜	N.P.	Kirby Petroleum.....	400	1¼	1⅛	1⅛	— ⅛
¾	⅛	1½	⅛	$25	Leonard Oil Dev.....	2,400	¾	⅝	¾	+ 1/16
3½	⅞	9½	1¼	N.P.	Lion Oil Refg.....					
11	3⅜	12¼	4¾	N.P.	Lone Star Gas.....	1,000	9¼	8⅝	9	— ¼
¼	⅛	..	..	$1	Magdalena Syndicate..					
8	3¼	7	4	N.P.	Margay Oil Co.....					
3⅜	1½	5	2	N.P.	Mexico-Ohio Oil.....					
2	½	5¼	1	N.P.	Michigan Gas & Oil....	1,200	5	4½	5	+ ½
1½	½	4	⅜	N.P.	Mid. States Pet. A vtc.	100	2⅜	2¼	2¼	+ ¼
⅜	¼	1⅜	¼	N.P.	do B vtc.....	500	⅞	⅞	⅞	0
⅜	¼	1¼	¼	$1	Mountain & Gulf.....	100	½	½	½	0
4¾	2⅛	6½	2½	10	Mountain Producers...	1,900	5¾	5½	5¾	+ ¼
14⅜	8	20	10	N.P.	National Fuel Gas.....	900	15⅞	15	15	0
⅞	⅜	1¾	½	$5	New Bradford Oil.....	600	1½	1⅜	1⅜	+ ¼
1½	⅜	5	½	N.P.	North Central Texas..					
⅜	⅛	½	⅛	N.P.	North European.....	100	1/16	1/16	1/16	0
5	2	7⅞	3	N.P.	Oil Stocks Ltd. A.....	500	*7⅞	7½	7⅞	+ ½
8	3	7½	3	N.P.	Pacific Western.....	600	6½	6⅜	6½	+ ½
..	..	..	..	N.P.	Pantepec of Venezuela					
⅜	⅛	3¾	⅛	N.P.	Producers Royalty....	9,500	¾	½	⅝	0
60¾	40	49¾	21	$100	Pure Oil 8% pfd.....	160	43¼	40½	43¼	+ 2¼
1	½	2½	⅜	N.P.	Red Bank Oil.....					
½	⅛	1⅞	¼	N.P.	Reiter-Foster Oil.....	700	1	⅞	1	— ⅛
1	⅜	2¼	¼	$25	Richfield Oil pfd.....	800	1⅛	⅞	1	0
1½	½	8	1½	N.P.	Root Refining pfd.....	300	6	5⅛	6	0
½	½	..	..	$10	Royalty Corp. pfd.....					
2⅜	⅜	4⅛	⅜	N.P.	Ryan Consolidated....	900	2½	2	2¼	+ ⅞
⅞	⅛	1	⅜	$10	Salt Creek Consol.....	100	⅝	⅝	⅝	0
5½	2⅞	9	3½	10	Salt Creek Prod.....	1,900	6⅞	6⅛	6⅞	+ ⅜
..	..	3¾	⅜	25	Shrev. El Dorado P.L.					
5	2⅞	6⅜	3¼	N.P.	Southland Royalty....	2,400	5¾	4⅞	5¾	+ ¾
⅜	¼	1½	¼	$5	Sunray Oil.....	300	1⅛	1⅛	1⅛	0
10½	4½	13	6¼	N.P.	Texon Oil & Land.....	300	9	8¼	9	0
⅛	⅛	1⅝	⅛	$5	Venezuela Petroleum..	5,600	1¼	⅞	1⅛	+ ⅛
2⅜	1⅛	3¾	1½	1	Woodley Petroleum....	900	3	2½	3	+ ½
1⅜	½	¾	½	N.P.	Y Oil & Gas.....					

•New high. †New low.

New York Bonds

Week Ended Sept. 1

	High	Low	Last	Change
Asso. Oil Gold 6s.....	103½	103½	103½	+ ¼
Atlantic Refg. deb. 5s....	104⅛	103	103	— 1⅛
Calif. Pet. 5s.....	94⅞	94⅞	94⅞	— ⅛
Calif. Pet. 5½s.....	100	99⅛	99⅜	+ ⅜
General Pet. 5s.....	104	103½	104	+ ½
Humble Oil & Refg. 5s...	104	103½	103⅞	0
Pan Amer. Pet. of Calif. 6s	32¼	31⅞	31⅞	+⅛
Pan Amer. Pet. of Calif. 6s ctfs.....	30½	28⅛	30½	0
Phillips Pet. 5½s.....	87¾	86¼	87⅜	+ ⅜
Pure Oil 5½s.....	89¼	89	89	— ½
Pure Oil 5½s.....	85⅛	84½	85	+ ½
Richfield Oil of Calif. 6s	24	23½	24	+ ½
Richfield Oil of Calif. 6s ctfs.....	23¾	22	23	— 1⅜
Shell Union Oil 5s.....	90¾	90	90¼	0
Shell Union Oil 5s w.w..	90¾	90	90⅝	+ ⅜
Sinclair Con. Oil 7s.....	102⅝	101⅞	102¼	— ⅛
Sinclair Con. Oil 6½s....	101¼	100¾	100¾	0
Sinclair Pipeline 5s.....	103¼	103⅛	103⅛	— ⅛
Skelly Oil 5½s.....	85	84¾	85	0
S. O. N. J. 5s.....	105	104½	104½	— ⅛
S. O. N. Y. 4½s.....	101½	101	101⅜	+ ⅜
Union Oil of Calif. 6s A..	107½	107	107	— ⅜
Union Oil of Calif. 5s C..	101¼	101¼	101¼	— ⅛
Union Oil of Calif. 5s w.w.	97¼	97	97¼	+ ¼
Warner-Quinlan 6s.....	35	29½	35	+3⅛

New York Curb Bonds

Week Ending Sept. 1

	High	Low	Last	Change
Cities Serv. 5s '50.....	34⅞	33½	34	— ⅜
Cities Serv. 5s '66.....	33⅝	33½	33½	— ¼
Cities Serv. G. 5½s '42..	55½	54½	54½	— ¼
Cities Serv. G. P. 6s '43..	68	67	67	0
Cont. Oil 5¼s '37.....	100¼	100	100¼	+ ½
Empire O & R 5½s '42..	49½	47¼	47⅝	—1
Gulf Oil 5s '37.....	101⅞	101	101⅛	0
Gulf Oil 5s '47.....	102¼	101	101⅜	— ⅜
Indep. Oil 6s '39.....	100⅝	100½	100⅝	+ ⅜
Sun Oil 5½s '39.....	103	102½	103	+ ½
Sun Oil 5s '34.....	101½	101½	101½	— ¼
Tide Water 5s '79.....	61¾	60⅛	60⅛	—4⅛

Pittsburgh Stock Exchange

Transactions Week Ended Sept. 1, 1933

	Sales	High	Low	Last	Change Over Week
Ark. Nat. Gas pfd.	115	2	1½	1½	—1½
†Col. Gas & Elec.	1,434	20	19¼	19¼	— ⅛
Devonian Oil....	100	8¼	8¼	8¼	+ ¼
†Lone Star Gas...	3,319	9¼	8¾	9	— ¼
‡ do 6 p.c. conv. pfd.....	33	84	82½	82½	—2½
Phoenix Oil.....	1,500	.08	.07	.07	—.1
Plymouth Oil....	635	17	14½	17	+1⅞
West. Pub. Serv..	983	7¼	7⅛	7⅛	— ⅜

†Payable in new preferred stock. ‡Unlisted.

CLEVELAND — Directors of the American Oil Burner Association, meeting in Washington Aug. 23, voted to hold the 11th national oil burner show and convention in Philadelphia. The announcement was made by Harry F. Tapp, executive secretary of the association, who said that the exact dates for the 1934 show and convention would be given out later.

ADVERTISERS IN THIS ISSUE

This index is published as a convenience to the reader. Every care is taken to make it accurate, but National Petroleum News assumes no responsibility for errors or omissions.

Advertising Federation of America..... 64
American Can Co..... 34-35
American Weekly..... 38

Butler Mfg. Co..... 57

Champion Pneumatic Machinery Co..... 44
Champlin Refg. Co..... Second Cover
Classified Advertising..... 65
Continental Oil Co..... 2
Cushing Refg. & Gasoline Co..... 4

Daniger Refineries..... 3

Ethyl Gasoline Corp..... 58-59

Glycerine Producers' Assn..... Third Cover
Gousha Co., H. M..... Fourth Cover
Graver Tank & Mfg. Corp..... 45
Gulf Refg. Co..... 54

Humble Oil & Refg. Co..... 45

Kellogg Co., M. W..... 25

Leader Industries, Inc..... 27

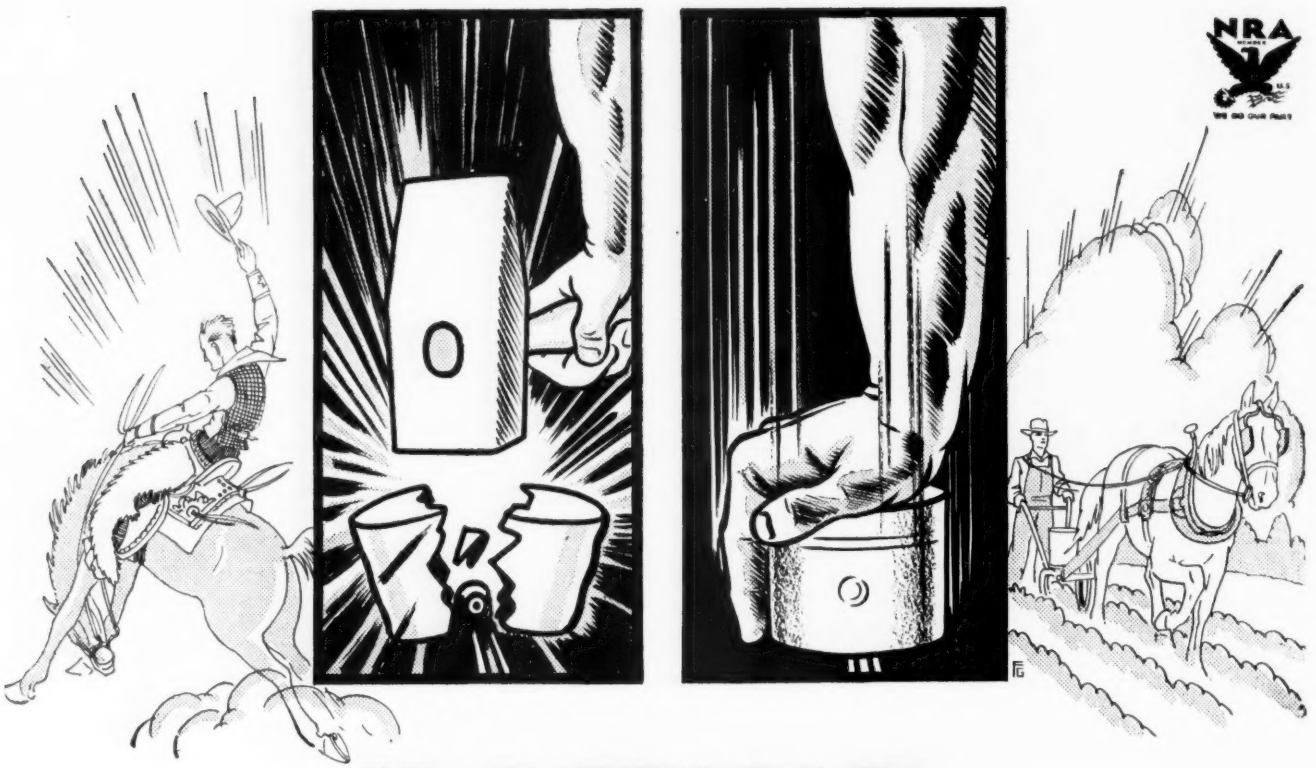
Marathon Oil Co..... 68

National Meter Co..... 61
National Petroleum News..... 61
National Refg. Co..... 54
Neptune Meter Co..... 1

Pennsylvania Lubricating Co..... 53
Platt's Oilgram..... 63

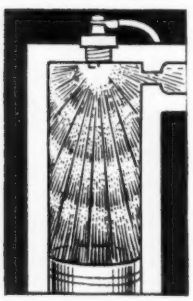
Sun Shipbuilding & Dry Dock Co..... 37
Superior Oil Works..... 44

Universal Oil Products Co..... 23



POWER

Bronco or Percheron



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